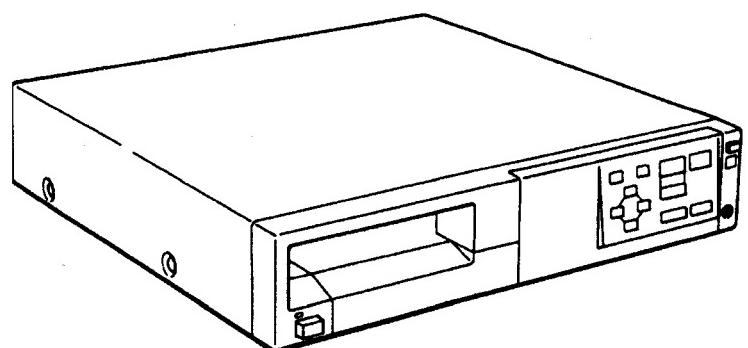


SONY.

COLOR VIDEO PRINTER

**UP-1200A
UP-1200AEPM**

SERVICE MANUAL



SAFETY RELATED COMPONENT WARNING

Components identified by shading and  marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

Note:

This service manual is jointly used for the UP-1200A (UC) and UP-1200AEPM (EK) destinations.

If a difference exists between each destination, the model name is described on the corresponding page.

The common description is not contained in this manual.

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SECTION 1 GENERAL

1-1. SPECIFICATIONS UP-1200A

Power requirements
120 V AC, 50/60 Hz

Power consumption
About 1.8 A max. at 25°C, 120 V AC

Operating temperature
5°C to 35°C (41°F to 95°F)

Dimensions
About 424 × 91 × 397 mm (w/h/d)
(16³/₄ × 3⁵/₈ × 15³/₄ inches)

Mass
About 8.5 kg (18 lb 12 oz)

Printing system
Sublimation heat transfer printing

Thermal head
5.6 dot/mm (512 dots)

Total gradation
256 levels each for yellow, magenta, and cyan

Printing time
Approximately 60 seconds (normal size color printing)
Approximately 30 seconds (monochrome printing)

TV system
NTSC/EIA standards

Input connectors
S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin
Y: 1 Vp-p
C: 0.29 Vp-p color burst
75 ohms (75 ohm termination switch set to ON)
VIDEO (NTSC composite video signal): BNC connector
1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative
AC IN (for power input)

Output connectors
S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin
Y: 1 Vp-p, 75 ohms
C: 0.29 Vp-p color burst, 75 ohms
(75 ohm termination switch set to ON)
VIDEO (NTSC composite video signal): BNC connector,
1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative

Controls connectors
REMOTE 1 (front panel, for the supplied remote control unit only): Special mini jack
REMOTE 2 (automatic printing connector): Stereo mini jack
For details of the timing pulse to REMOTE 2, see "Using the automatic printing capabilities" on this page.

This section is extracted from instruction manual.

Ink ribbon cassette and printing sheet sets
Color printing pack: UPC-1010 (100 sheets)
B & W printing pack: UPC-1020 (100 sheets)
Self laminating color printing pack: UPC-1040 (75 sheets)

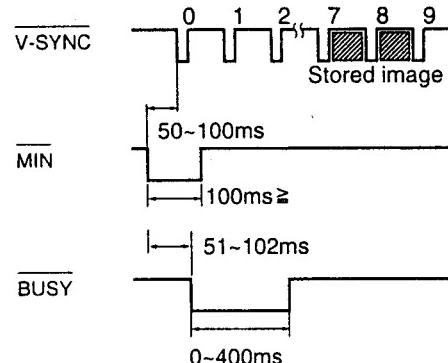
Supplied accessories
Color printing pack (1)
Paper tray (1)
Paper cover (1)
Remote control unit (1)
Connecting cable for the remote control unit (1)
Dry battery SUM-3 (NU) (2)
AC power cord (1)
Warranty card (1)
Operating instructions (1)

Using the automatic printing capabilities (REMOTE 2)

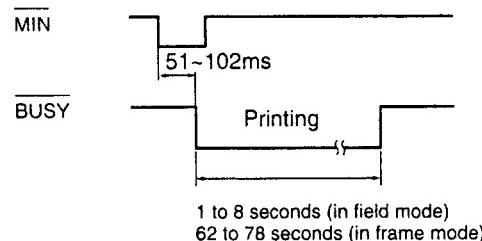
If you send the remote control pulse signals illustrated below through the REMOTE 2 connector, the printer is remotely controlled according to the settings of REMOTE 2 from the SET UP menu. (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 52)

To begin, turn on the power and select the input signal. Display the image from the video source, then send a remote control signal shown below.

MEMORY IN timing



Printing timing



Design and specifications are subject to change without notice.

UP-1200AEPM

Power requirements

220 to 240 V AC (~), 50/60 Hz

Power consumption

About 1.0 A max. at 25°C, 240 V AC (~)

Operating temperature

5°C to 40°C (41°F to 104°F)

Operating humidity

20 % to 80 % (no condensation allowed)

Storage and transport temperature

-20°C to 60°C (-4°F to 140°F)

Storage and transport humidity

20 % to 90 % (no condensation allowed)

Dimensions

About 424 x 91 x 397 mm (w/h/d)
(16³/4 x 3⁵/8 x 15³/4 inches)

Mass

About 8.5 kg (18 lb 12 oz)

Printing system

Sublimation heat transfer printing

Thermal head

6.72 dot/mm (608 dots)

Total gradation

256 levels each for yellow, magenta, and cyan

Frame memory

One frame memory

Printing time

Approximately 60 seconds (normal size color printing)

Approximately 30 seconds (monochrome printing)

TV system

PAL B.G.I. standards

Input connectors

S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin

Y: 1 Vp-p

C: 0.3 Vp-p color burst

75 ohms (75 ohm termination switch set to ON)

VIDEO (PAL composite video signal): BNC connector

1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative

AC IN (for power input)

Output connectors

S-VIDEO (Separate luminance (Y) and chrominance (C) signals): DIN 4-pin

Y: 1 Vp-p, 75 ohms

C: 0.3 Vp-p color burst, 75 ohms

(75 ohm termination switch set to ON)

VIDEO (PAL composite video signal): BNC connector

1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative

Controls connectors

REMOTE 1 (front panel, for the supplied remote control unit only): Special mini jack

REMOTE 2 (automatic printing connector): Stereo mini jack

For details of the timing pulse to REMOTE 2, see "Using the automatic printing capabilities" on this page.

Ink ribbon cassette and printing sheet sets

Color printing pack: UPC-1010 (100 sheets)

B & W printing pack: UPC-1020 (100 sheets)

Self laminating color printing pack: UPC-1040 (75 sheets)

Supplied accessories

Color printing pack UPC-1010 (1)

Paper tray (1)

Paper cover (1)

Remote commander RM-5100 (1)

Connecting cable for the remote commander (1)

Dry battery (R6) (2)

AC power cord (1)

Instructions For Use (1)

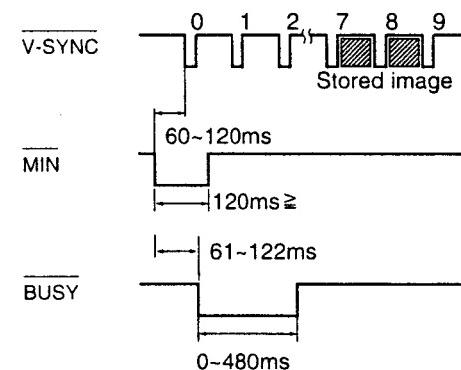
Using the automatic printing capabilities

(REMOTE 2)

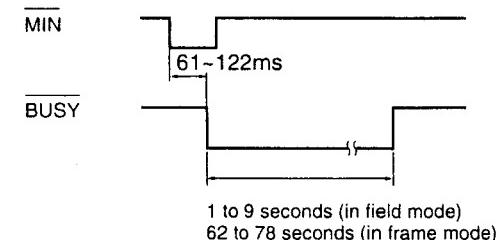
If you send the remote control pulse signals illustrated below through the REMOTE 2 connector, the printer is remotely controlled according to the settings of REMOTE 2 from the SET UP menu. (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 54)

To begin, turn on the power and select the input signal. Display the image from the video source, then send a remote control signal shown below.

MEMORY IN timing



Printing timing

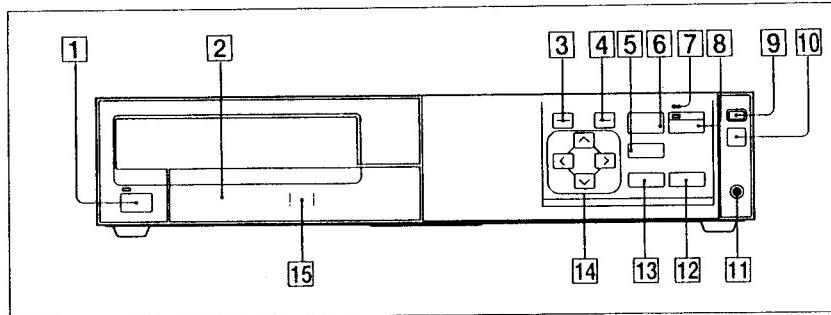


Design and specifications are subject to change without notice.

1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

For details, see the pages indicated in ().

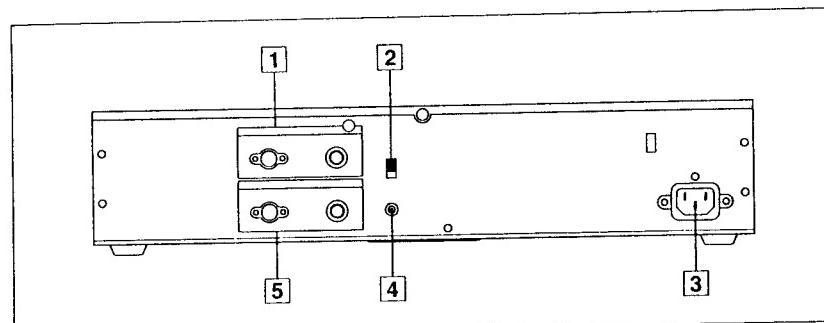
Front



- [1] POWER switch**
Press to turn the printer on or off.
- [2] Paper tray/paper cover (10, 41)**
Paper tray: Load paper into this tray.
Paper cover: The printout is ejected to this tray.
- [3] MENU button**
This button is used to display menus or to return to the regular screen from the main menu or sub menus.
- [4] EXEC button (29, 35, 36, 37, 49)**
Press this button to return to the previous menu. Also, this button is used to enter characters for a caption.
- [5] SOURCE/MEMORY button (15, 31, 32, 52)**
Press to select which signal is to be output to the monitor.
The memory image and source image are changed whenever you press this button.
- [6] MEMORY IN button (15, 31, 32)**
Press to store an image into memory.
- [7] ALARM lamp (66)**
This lamp lights, in orange, when the paper has jammed or another error occurs.

UP-1200A

Rear

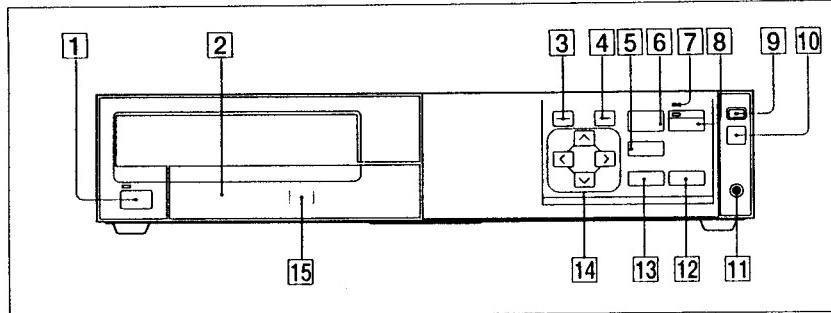


- [1] INPUT connectors (39)**
Used to connect to the video equipment for source image.
 - [2] 75-ohm termination switch (for RGB input signal and composite video signal) (39)**
Normally, set this switch to ON. Set it to OFF if the input signal should drop when you connect additional equipment to the video equipment.
 - [3] AC IN connectorx (39, 40, 41)**
Used to connect to a wall outlet with the supplied power cord.
 - [4] REMOTE 2 connector (41)**
Used to connect the FS-20 foot switch (not supplied) or input remote control pulse signals for automatic printing.
 - [5] OUTPUT connectors (40)**
Used to connect to the video monitor.
- | Connector | Connectable equipment |
|-----------|--|
| S-VIDEO | Video equipment with a Y/C separated output |
| VIDEO | Video equipment with a composite video signal output |
- | Connector | Connectable video monitor |
|-----------|---|
| S-VIDEO | Video monitor with a Y/C separated input |
| VIDEO | Video monitor with a composite video signal input |

UP-1200AEPM

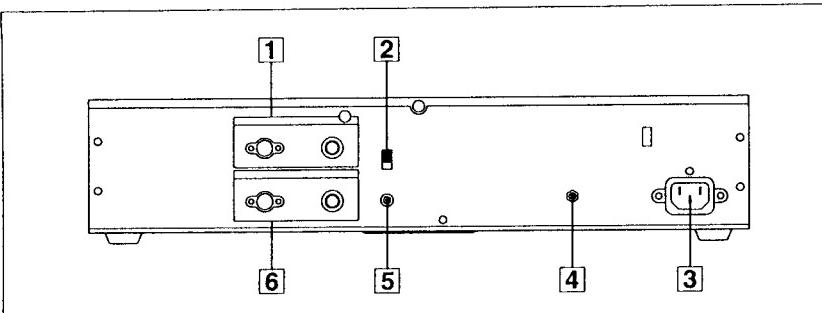
For details, see the pages indicated in ().

Front



- [1] POWER ① switch**
Press to turn the printer on or off.
- [2] Paper tray/paper cover (10, 41)**
Paper tray: Load paper into this tray.
Paper cover: The printout is ejected to this tray
- [3] MENU button**
This button is used to display menus or to return to the regular screen from the main menu or sub menus.
- [4] EXEC button (29, 35, 36, 37, 49)**
Press this button to return to the previous menu. Also, this button is used to enter characters for a caption.
- [5] SOURCE/MEMORY button (15, 31, 32, 52)**
Press to select which signal is to be output to the monitor.
The memory image and source image are changed whenever you press this button.
- [6] MEMORY IN ⇨ button (15, 31, 32)**
Press to store an image into memory.
- [7] ALARM lamp (66)**
This lamp lights, in orange, when the paper has jammed or any problem occurs.
- [8] PRINT □ button (16, 31, 32)**
Press to make printouts.
- [9] PUSH OPEN button (8)**
Press to open the right front panel door when loading an ink ribbon cassette.
- [10] Remote sensor (43)**
Aim the head of the remote control unit toward this sensor.
- [11] REMOTE 1 connector (41)**
Used to Connect the remote control unit (supplied) when being used as a wired type.
- [12] STOP button (16, 20, 31, 56)**
Press to stop printing midway.
Press this button when the message "STOP STOP" appears.
- [13] MEMORY PAGE button (25)**
Press to select the memory page.
- [14] Cursor keys**
Press to position the cursor. Select a desired item from the menu by pressing the \wedge or \vee button and set the value by pressing the $<$ or $>$ button.
Also, these keys are used to enter characters for a caption.
- [15] PUSH indication (10, 68)**
Press to remove the paper tray.

Rear



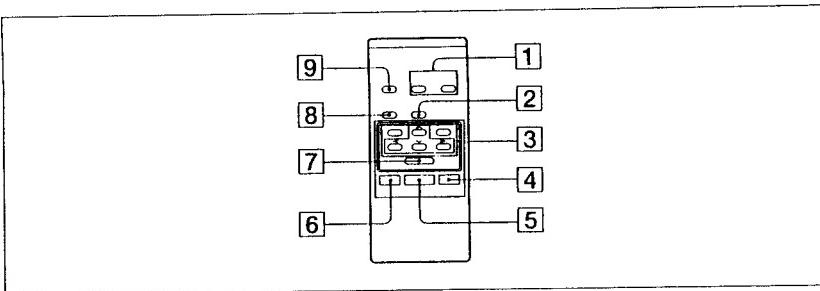
- [1] INPUT connectors (39)**
Used to connect to the video equipment for source image.

Connector	Connectable equipment
S-VIDEO	Video equipment with a Y/C separated output
VIDEO	Video equipment with a composite video signal output
- [4] Equipotential ground terminal ▽**
Used to connect to the equipotential plug to bring the various parts of a system to the same potential.
Refer to "Important safeguards/notices for use in the medical environments on page 2."
- [5] REMOTE 2 connector (41)**
Used to connect the RM-91 remote commander (not supplied) or input remote control pulse signals for automatic printing.
- [6] OUTPUT connectors (40)**
Used to connect to the video monitor.

Connector	Connectable video monitor
S-VIDEO	Video monitor with a Y/C separated input
VIDEO	Video monitor with a composite video signal input

Refer to "Important safeguards/notices for use in the medical environments on page 2."

Remote Control Unit



① PRINT QTY + and - buttons (18)

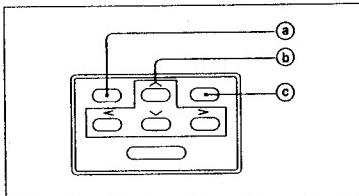
Used to set the number of copies of one printout (on the regular screen).

Button	Operation
+	Increases the number of copies.
-	Reduces the number of copies.

② MULTI PICTURE button (28)

Press to access the MULTI PICTURE sub menu directly from the any other screen.

③ Menu control keys



④ MENU button

This button is used to display menus or to return to the regular screen from the main menu or sub menus.

⑤ Cursor keys

Press to position the cursor. Select a desired item from the menu by pressing the \wedge or \vee button and set the value by pressing the $<$ or $>$ button.

Also, these keys are used to enter characters for a caption.

⑥ EXEC button (29, 35, 36, 37, 49)

Press this button to return to the previous menu. Also, this button is used to enter characters for a caption.

⑦ PRINT button (16, 31, 32)

Press to make printouts.

⑧ MEMORY IN button (15, 31, 32)

Press to store an image into memory.

⑨ SOURCE/MEMORY button (15, 31, 32, 52)

Press to select which signal is to be output to the monitor.

The memory image and source image are changed whenever you press this button.

⑩ STOP button (16, 31, 56)

Press to stop printing midway.

Press when "STOP STOP STOP" appears. Press this button when the message "STOP STOP STOP" appears.

⑪ COLOR ADJUST button (45)

Press to access the COLOR ADJUST sub menu directly from any other screen.

⑫ MEMORY PAGE button (25)

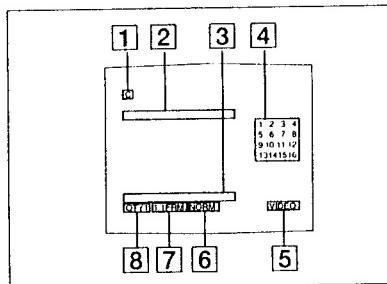
Press to select the memory page.

Monitor Display

There are two types of screen display; the regular screen display and the menu screen.

Regular screen message

When you first turn on the printer, the regular screen message appears.



⑬ C (Caption)

C is displayed in white when the printer is set to print a caption.

C is displayed in dark blue when the printer is not set to print a caption.

M is displayed in white when the printer is set to print a mirror caption.

⑭ Error message display area

Error messages are displayed.

⑮ Warning message display area

Warning messages are displayed.

⑯ Number of four or 16 reduced image area

When the printer is set to store multiple reduced images into memory, corresponding numbers appear to indicate the memory status.

⑰ Image type display

This indicates the type of image shown on the monitor screen.

When the image being played back from print source equipment is displayed on the screen, the corresponding print source (the input signal connector name, for example VIDEO) appears. When an image stored in memory is displayed on the screen, MEMORY appears.

⑱ Print mode display

This indicates the selected print mode. Several examples are shown below:

Display	Print mode
NORM	Makes a printout of one normal image
N2	Makes a printout of two identical normal images
MIR	Makes a printout of one mirror image
M16	Makes a printout of 16 reduced mirror images

⑲ Memory page display

The memory page you select appears.

The memory page whose image is being printed blinks in green.

The following shows several examples.

Display	Meaning
1/1FRM	The frame mode is selected.
1/2FLD	The second page is selected in field mode.

⑳ Number of copies to be printed

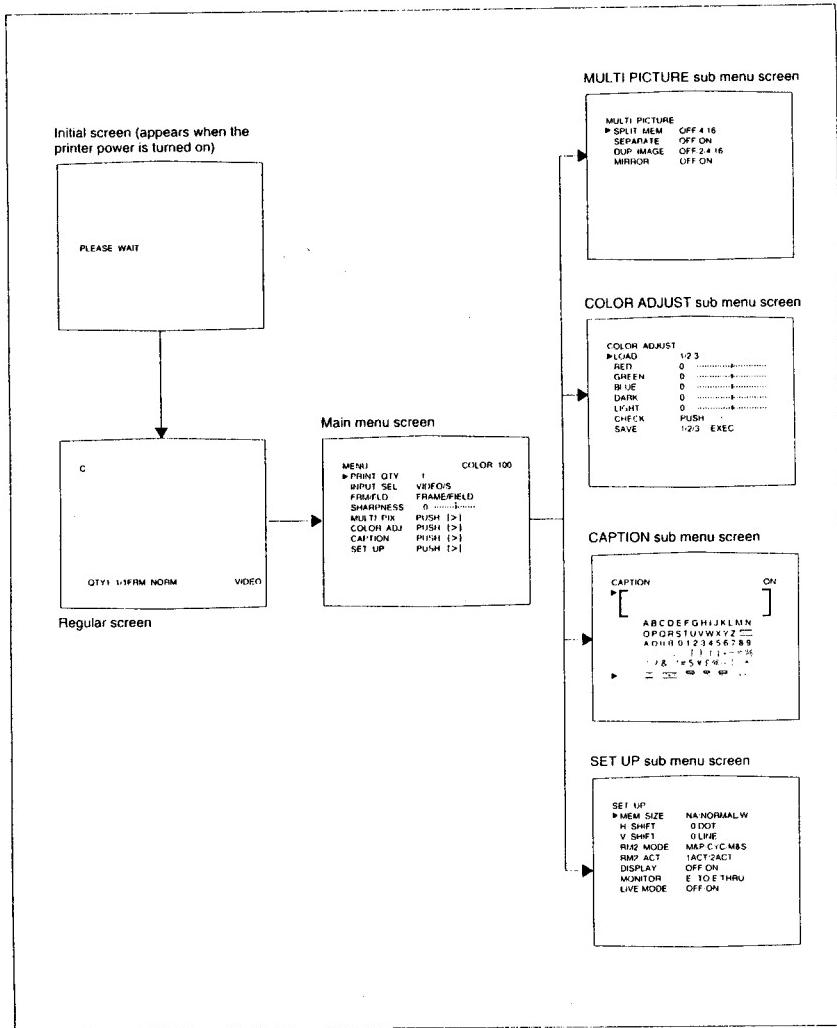
Indicates the number of copies to be printed. This item blinks while the printer is busy. Also, the color changes to indicate the progress while making a color printout, as follows:

Printing start - yellow - magenta - cyan - printing end. When making black and white printouts, this blinks in white.

Menu screen

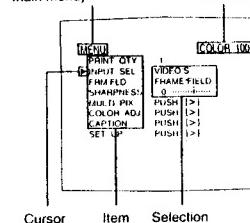
Menu screen tree-chart

The menu screen configuration is shown using the tree-chart.



Menu screen display

Menu name (in this case, main menu) **Type of ink ribbon cassette and remaining ribbon (indicates the remaining number of printouts that can be made with the installed ribbon)**



About remaining ribbon

Use the remaining ribbon display as a guide only. Depending on the type of ribbon being used, the printer may not be able to correctly display the actual amount of ribbon remaining.

Display color

The color indicates the printer status.

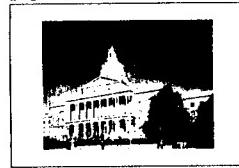
Display color	Meaning
Light blue	Indicates the menu name.
Green	In the item column, indicates the selected item. In the selection column, indicates an item that has already been set or one that must be set.
White	In both the item and selection column, indicates that the item has not been selected or has not yet been set
Dark blue	Indicates that this item or selection cannot be selected. They are functions which become effective depending on another item or selection settings.

1-3. SYSTEM OVERVIEW

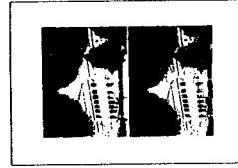
The Sony UP-1200/1200A color video printer is designed for capturing images from video equipment and making printouts of those images. By changing the printout mode, different types of printouts can be made. Also, you can add a caption to a printout. Printer setup is done interactively by picking from displayed menus. The printer can make the following types of printouts.

Printouts that can be made with the printer

Printout of a full-size image
(page 14)



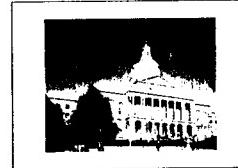
Printouts of identical images
(page 28)



Printout of four reduced images
(pages 26 and 30)



Printout of a mirror image (page 28)

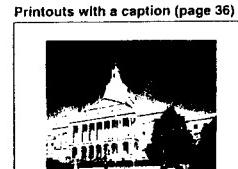


Printout of 16 reduced images
(pages 26 and 30)



In addition to the above printouts of multiple reduced images, printouts of multiple reduced images with white borders can be made.

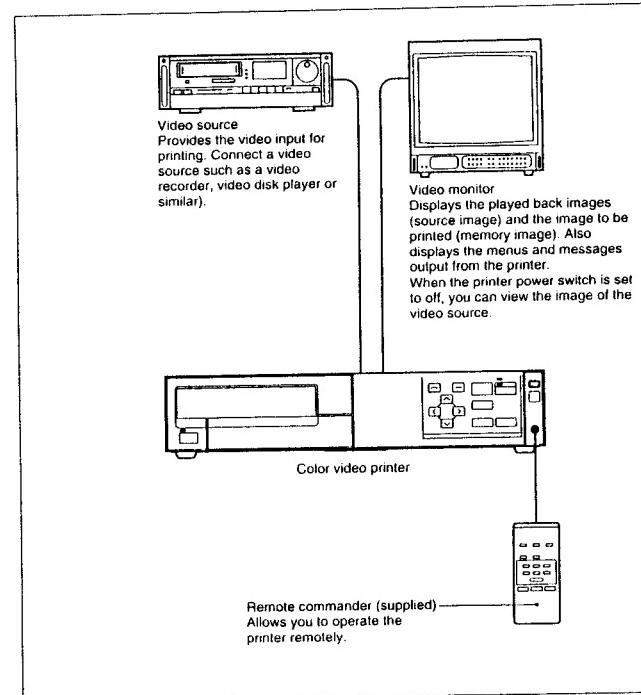
Printouts of mirror images where the image is rotated about its vertical axis



Printouts with a caption (page 36)

System Configuration

The following shows an example printer system configuration.



1-4. BEFORE PRINTING

This section describes the following operations that must be made prior to start printing after installing the printer and making connections.

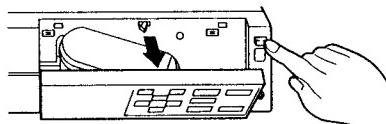
- Loading an ink ribbon cassette (see page 8)
- Loading paper (see page 10)
- Selecting the input signal (see page 12)

Once the above operations are done, there should be no need to subsequently perform in routine printing operations. Perform the above operations, if necessary.

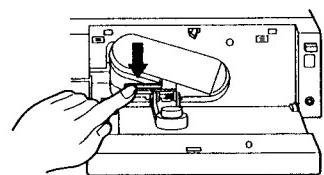
Loading an Ink Ribbon Cassette

To make printouts, an ink ribbon cassette and paper should be loaded. Both of those should be used in correct pairs. (see "Ink Ribbon Cassette and Paper" page 64)

- 1 Push the PUSH OPEN button.
The front panel opens.



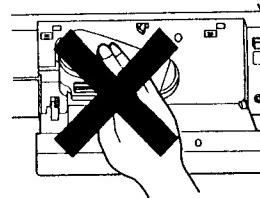
- 2 Remove the ink ribbon cassette by pulling down the EJECT lever.



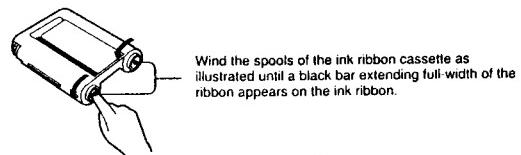
Loading an Ink Ribbon Cassette

Note

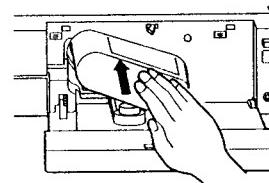
Never put your hand into the ink ribbon cassette dock. The thermal head becomes very hot. You may burn yourself if you touch it.



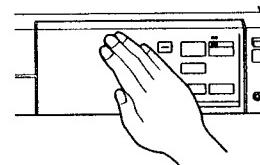
- 3 Take up any slack in the ink ribbon.
If the ribbon is left slack, it may be crumpled and damaged when inserted.



- 4 Insert the ink ribbon cassette firmly until it stops.



- 5 Close the front panel.



Notes

When using ink ribbon cassettes:

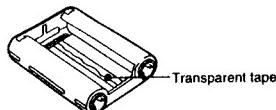
- Once an ink ribbon has been completely used, replace it. Ink ribbon cassettes are not reusable.
- Do not touch the ribbon or place the cassette in a dusty place. Body oils or dust stuck to the ink ribbon will cause imperfect printing.

When storing ink ribbon cassette:

- Avoid placing the ink ribbon cassette in a location subject:
 - high temperatures
 - high humidity
 - excessive dust
 - direct sunlight
- Store a partially used ink ribbon in its original bag.

If your ink ribbon should tear

Repair the tear with transparent tape. There should be no problem in using the remaining portion of the ribbon.



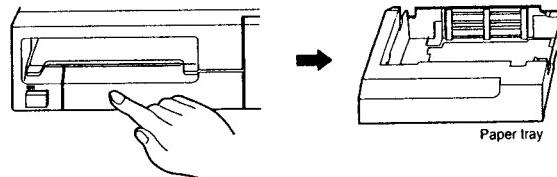
Loading Paper

Follow these steps to load paper in the printer. Use only the ink ribbon cassette and paper packed in the same carton, that is correctly in pairs. Be careful not to touch the printing surface.

Note

When loading the paper while the printer is operating, do not turn off the power. If you turn off the power, the image stored in memory will be lost.

- 1 Push PUSH on the paper tray.
The paper tray is ejected.

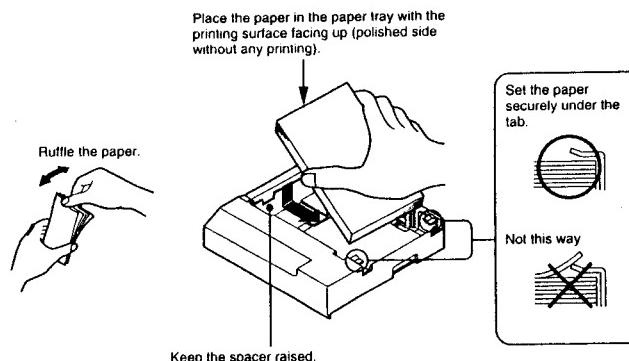


- 2 Place the paper into the paper tray.

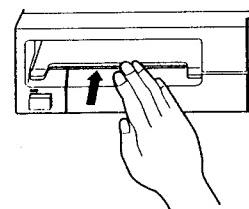
Notes

- The paper tray holds up to 100 sheets. When you add paper to a partly-full tray, be careful that the total number of sheets does not exceed 100. If you exceed this limit, paper jams may occur.

- Load the paper so that it lays flat in the paper tray.
If the paper is curled, it will overflow the paper tray and the printing position may shift. If this happens, load fewer sheets in the paper tray.



- 3 Slide the paper tray back into the printer until it clicks into place.

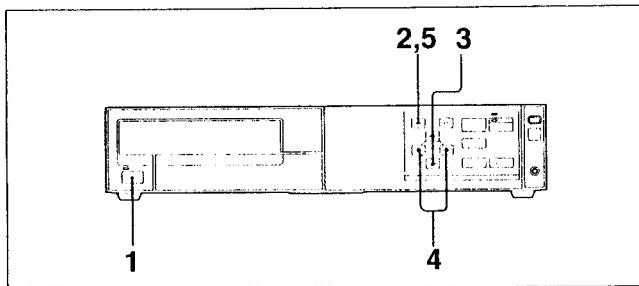
**Notes**

When storing paper:

- Avoid placing the paper subject to:
 - high temperatures
 - high humidity
 - excessive dust
 - direct sunlight
- Keep the package for storing unused paper.

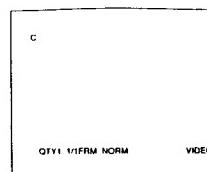
Selecting the Input Signal

Before printing, select the input signal. Once you have selected the input signal, this setting remains as is until you select another source.



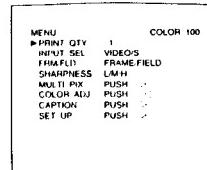
- 1** Turn on the video monitor and the printer.

The following message appears when the printer is ready to operate.

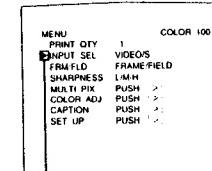


- 2** Press the MENU button.
The right screen appears.

Main Menu screen

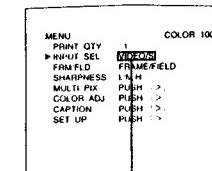


- 3** Select INPUT SEL by pressing the \wedge or \vee button.



Move the cursor to INPUT SEL by pressing the \wedge or \vee button.

- 4** Select the desired input signal by pressing the $<$ or $>$ button.



Switch the desired input signal to green by pressing the $<$ or $>$ button.
The name of the selected input signal appears in green.

Video monitor
(The name of the selected input signal appear on the screen.)

V → VIDEO

Source signal of the image to be printed

Signal from the video equipment connected to the VIDEO INPUT connector

S → S-VIDEO

Signal from the video equipment connected to the S-VIDEO INPUT connector

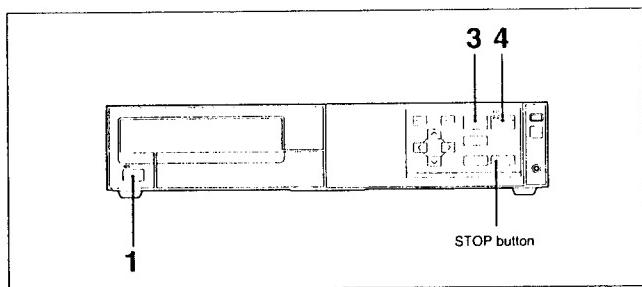
- 5** Press the MENU button.
The regular screen appears.

1-5. MAKING FULL-SIZE PRINTOUTS

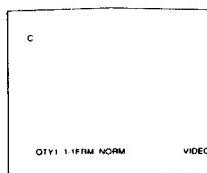
This section explains how to make a full-size printout. The operations described here is the basic procedure for making a printout.

Before making a full-size printout

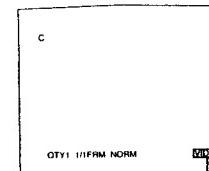
- All connections should have already been made. (see page 39)
- Ensure that the appropriate ink ribbon cassette/paper set is being used and that they are correctly loaded. (see pages 8, 10 and 64)
- Select the input signal to be used to make a printout. (page 12)
- Set the memory mode to store one full-size image into memory. (see page 27)
- Select the appropriate memory page. (see page 25)
- Set the print mode to make a printout of one normal full-size image. (see page 29)



- 1 Turn on the video monitor and the printer.
The right message appears when the printer is ready to operate.

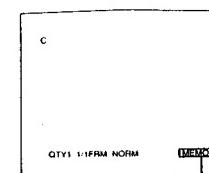


- 2 Start the video source.
(This operation is done using the controls of the video equipment acting as the source.)



Shows that the image from the video equipment are displayed on the screen.

- 3 Press the MEMORY IN button at the instant when the image you want to print appears on the screen.
That image is stored into memory.
The memory image (stored into memory) is displayed on the screen.



Shows that the images stored into memory is displayed on the screen.

If the stored image is blurred

A quickly moving image may be blurred when it is printed. If this happens, switch the FLM/FLD (frame/field) mode setting to FLD on the main menu and perform printing again. This should eliminate blur from the printout. However, since printing in field mode has a lower resolution than in the frame mode, the ultimate print quality will be slightly degraded.(see "About Memory" page 23)

To change the stored image

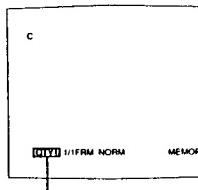
- ① Press the SOURCE/MEMORY button.
The image from the video source appears.
- ② Press the MEMORY IN button at the instant when the image you want to print appears.
The previous image is replaced.

Note

If you turn off the power, the image stored into memory will be lost. Thus, store the image into memory again when you turn on the power.

Continue to next page →

- 4** Press the PRINT button.
It takes about 60 seconds to make a color printout, or 30 seconds to make a black and white printout.



Blinks while printing.
During color printing: Printing start → yellow → magenta → cyan → printing end
During black and white printing: Printing start → white → printing end

- Notes**
- Do not handle the paper until printing has been completed.
 - Do not open the front panel while the printer is printing. Doing so may produce an unsatisfactory printout.

To stop printing before completion

Press the STOP button. Printing is abandoned and the paper is ejected to the print tray.

If the printer does not print

The printer will not print in the following case.

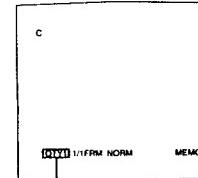
Wherever an error message is displayed on the video monitor. (see "Error Messages" page 64)

If a black line appears on the printout

Sometimes, a black line appears on the printout, although it does not appear on the video monitor. You can eliminate the black line from the printout. (see "Changing the Printout Area" page 52)

UP-1200AEPM

- 4** Press the PRINT button.
It takes about 60 seconds to make a color printout, or 30 seconds to make a black and white printout.



Blinks while printing.
During color printing: Printing start → yellow → magenta → cyan → printing end
During black and white printing: Printing start → white → printing end

- Notes**
- Do not handle the paper until printing has been completed.
 - Do not open the front panel while the printer is printing. Doing so may produce an unsatisfactory printout.

To stop printing before completion

Press the STOP button. Printing is abandoned and the paper is ejected to the print tray.

If the printer does not print

The printer will not print when an error message is displayed on the video monitor. (see "Error Messages" page 64)

If a black line appears on the printout

Sometimes, a black line appears on the printout, although it does not appear on the video monitor. You can eliminate the black line from the printout. (see "Changing the Printout Area" page 52)

Notes

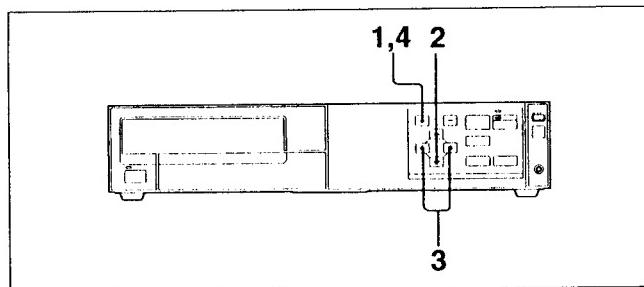
When preserving your printouts:

- Keep printouts in a dark and cool place.
- Do not stick plastic tape to the print. Also avoid leaving plastic eraser on top of the printout or putting the printout between things which contain plasticizer (a desk mat, etc.).
- Do not pour alcohol or other volatile organic solvents on the printouts.

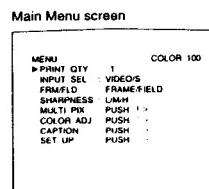
Making Multiple Copies of Identical Image

You can print up to 100 copies of a stored image.

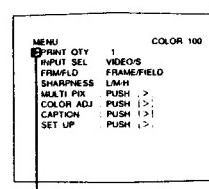
Do the following steps before you start printing or while printing. You can change the designated number of copies any time during printing.



- 1** Press the MENU button.
The right screen appears.



- 2** Select PRINT QTY by pressing the \wedge or \vee button.

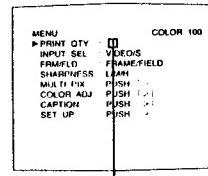


Move the cursor to PRT QTY by
pressing the \wedge or \vee button.

Continue to next page →

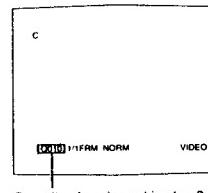
- 3** Set the number of copies by pressing the $<$ or $>$ button.

When setting	Button
To decrease the quantity	<
To increase the quantity	>



Quantity of copies

- 4** Press the MENU button.
The regular screen appears.



Quantity of copies set in step 3

When paper runs out during printing

Fill the paper tray with paper and press the PRINT button again. (see "Loading Paper" page 10)

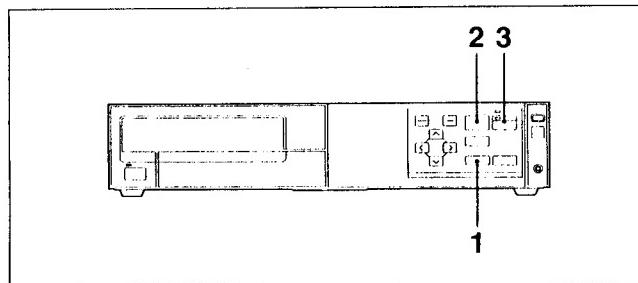
Designating the number of copies by the remote control unit

You can designate the number of copies directly on the regular screen.
To increase the number of copies, press the PRINT QTY + button. To decrease the number of copies, press the PRINT QTY - button.

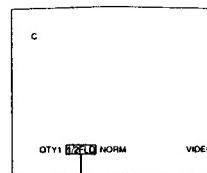
When setting	Button
To decrease the quantity	PRINT QTY -
To increase the quantity	PRINT QTY +

Queuing Images to be Printed

You can store images into the other memory page. These images are printed out as soon as the printer becomes free, provided field mode has been selected.



- 1 Select the memory page to be printed by pressing the MEMORY PAGE button.

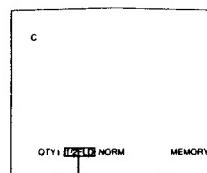


The available memory page is displayed in white.

- 2 Press the MEMORY IN button at the instant the image you want to print appears on the screen.

- 3 Press the PRINT button.

The image selected in step 2 is queued, being printed out as soon as the previous printing job has been completed.



Memory page containing images that have been queued for printing (lights in green). The memory page is again displayed in white once printing has been completed.

Note

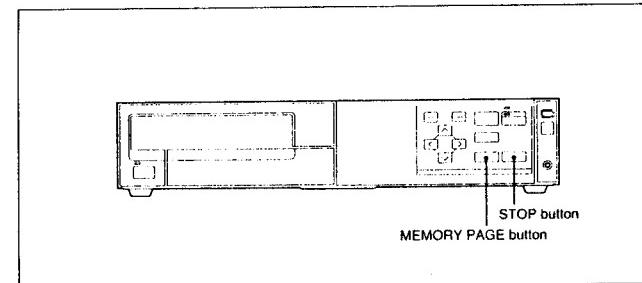
Another image cannot be stored into a memory page containing an image that has been queued for printing.

Deleting Images Stored into Memory Pages

You can delete images that have been stored in the memory pages.

Note

You cannot restore images once they have been deleted.



While holding down the STOP button, press the MEMORY PAGE button. All images are deleted from the memory pages.

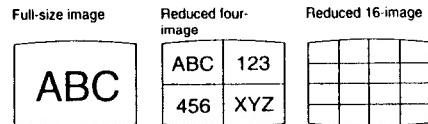
Note

You cannot delete images stored into memory pages by using the supplied remote commander.

1-6. MAKING VARIATIONS OF PRINTOUTS

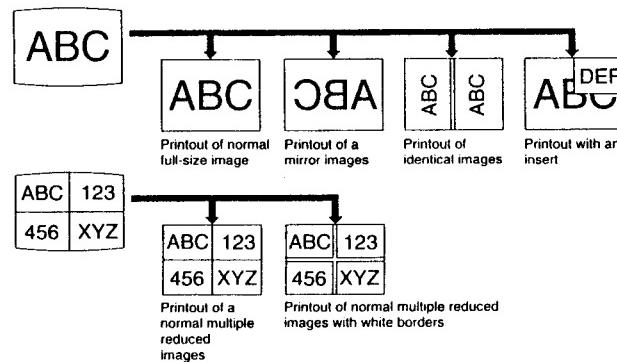
You can store various kinds of images into memory by changing the memory mode and can vary the printout of the stored images by changing the print mode. This section explains how to set the memory mode and change the print mode.

Types of images that can be stored into memory



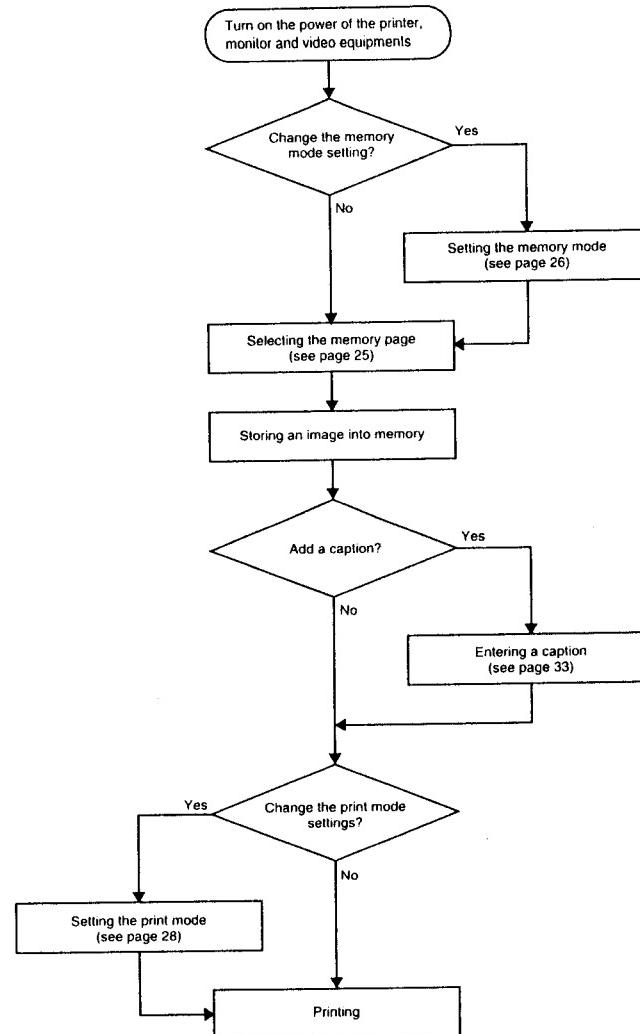
Types of printouts that the printer can produce

By varying the print mode, the following types of printout can be made using images stored in memory.



Printing Operation Flowchart

The following flowchart shows the flow of a printing operation.



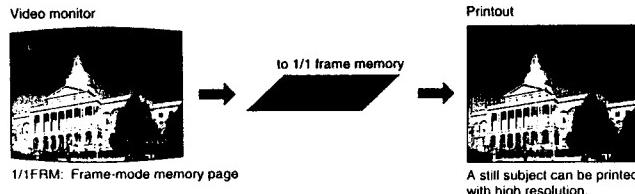
About Memory

To make a printout, it is first necessary to store the desired image into memory. The method of storing images into memory is called memory mode. By setting memory mode, you can store a full-size image or multiple reduced images into memory. Also, you have to decide how to use the printer's memory to store images. Two methods of using memory are supported. One is frame mode, while the other is field mode. The number of memory images you can store depends on whether you select frame or field mode.

Frame mode and field mode

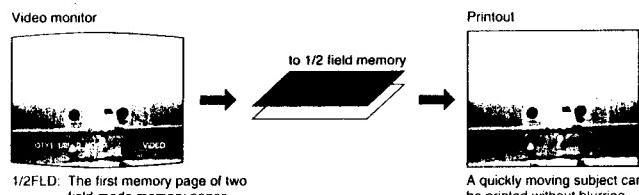
Frame (FRM) mode

Once image is stored in one memory.



Field (FLD) mode

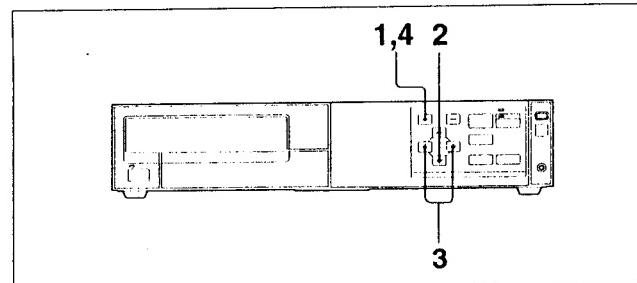
One memory is divided into two, and images for the two screens are stored to the resulting memory pages.



Making Variations of Printouts (continued)

Selecting frame or field mode

Before storing an image, select frame or field mode.



- 1 Press the MENU button.
The following screen appears.

Main Menu screen

MENU	
PRINT QTY	1
INPUT SEL	VIDEO S
FRM/FLD	FRAME FIELD
SHARPNESS	L/M/H
MULTI PIX	PUSH
COLOR ADJ	PUSH
CAPTION	PUSH
SET UP	PUSH

- 2 Select FRM/FLD by pressing the \wedge or \vee button.

MENU	
PRINT QTY	1
INPUT SEL	VIDEO S
FRM/FLD	FRAME FIELD
SHARPNESS	L/M/H
MULTI PIX	PUSH
COLOR ADJ	PUSH
CAPTION	PUSH
SET UP	PUSH

Move the cursor to FRM/FLD by pressing the \wedge or \vee button.

- 3 Select the desired mode by pressing the $<$ or $>$ button.

MENU	
PRINT QTY	1
INPUT SEL	VIDEO S
FRM/FLD	FRAME FIELD
SHARPNESS	L/M/H
MULTI PIX	PUSH
COLOR ADJ	PUSH
CAPTION	PUSH
SET UP	PUSH

Switch the desired mode to green by pressing the $<$ or $>$ button.

- 4 Press the MENU button.
The regular screen appears.

About memory pages

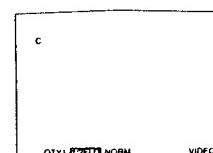
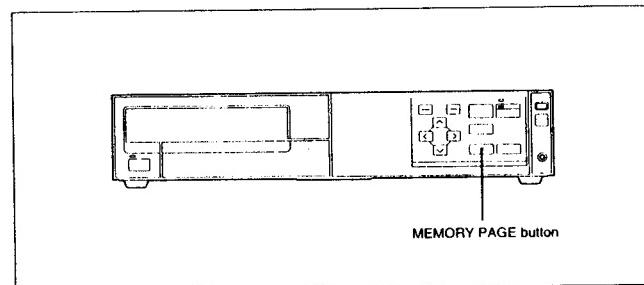
The unit has a single frame memory, enabling the unit to store one image in one memory page when FRM mode is selected, or two images in two memory pages when FLD mode is selected.

The memory used to store one screen image is called a memory page.

Selected memory mode	Number of usable memory pages	Usable memory pages
Frame mode (FRM)	1	1/1FRM
Field mode (FLD)	2	1/2FLD or 2/2FLD

Selecting a memory page

To select a memory page, press the MEMORY PAGE button.



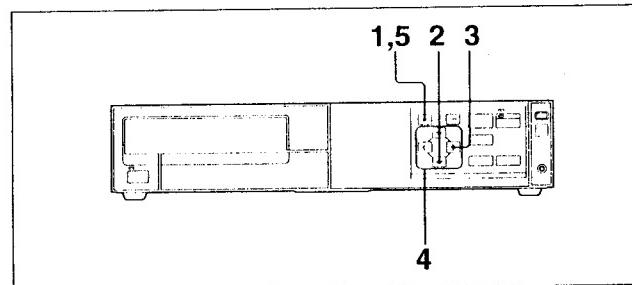
Press the MEMORY PAGE button until the desired memory page appears.

Selecting the Memory Mode

Decide the method for storing images in memory. Once you have selected memory mode, this setting remains as is until reset, even if you turn the power off.

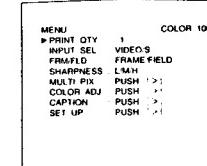
To control the printer remotely by using the remote control unit (supplied)

You can access the MULTI PICTURE sub menu by pressing the MULTI PICTURE button. Thus, press the MULTI PICTURE button to display the MULTI PICTURE sub menu. Then, follow the procedure below, starting from step 4.

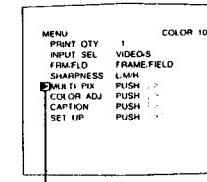


- 1 Press the MENU button.
The right screen appears.

Main Menu screen

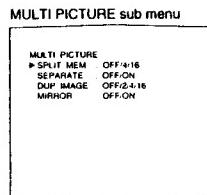


- 2 Select MULTI PIX by pressing the \wedge or \vee button.

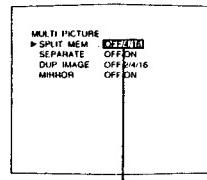


Move the cursor to MULTI PIX by pressing the \wedge or \vee button.

- 3** Press the **>** button.
The right screen appears.



- 4** Set the memory mode.
 ① Select the item to be set by pressing the **▲** or **▼** button.
 ② Select the method for storing images by pressing the **<** or **>** button.



Switch the desired mode to green by pressing the **<** or **>** button.

Item for memory mode	When you select	Settings	Contents of setting
SPLIT MEM	To set the number of images to be stored in one memory page.	OFF	Storing a full-size image
		4	Storing four reduced images
		16	Storing 16 reduced images

- 5** Press the MENU button.
The regular screen appears.

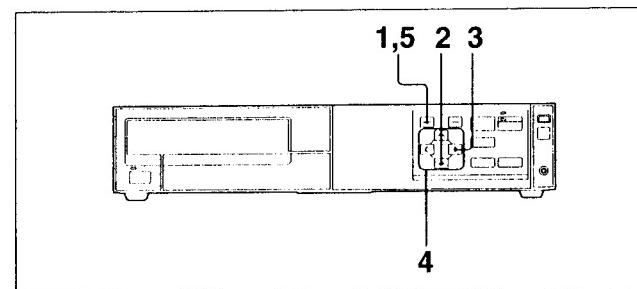
Selecting the Print Mode

You can make variations of printouts from the images stored in memory pages by changing the print mode. (see "Types of printouts that the printer can produce" page 21)

Once you have selected the print mode, this setting remains as is until you reset, even if you turn the power off.

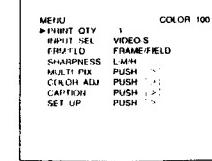
To control the printer remotely by using the remote control unit (supplied)

You can access the MULTI PICTURE sub menu by pressing the MULTI PICTURE button. Thus, press the MULTI PICTURE button to display the MULTI PICTURE sub menu. Then, follow the procedure below, starting from step 4.

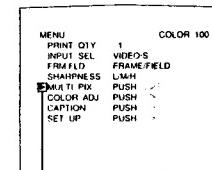


- 1** Press the MENU button.
The right screen appears.

Main Menu screen

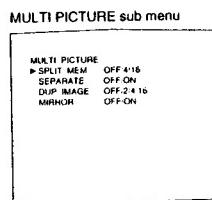


- 2** Select MULTI PIX by pressing the **▲** or **▼** button.

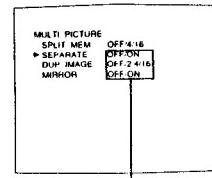


Move the cursor to MULTI PIX by pressing the **▲** or **▼** button.

- 3 Press the > button.
The right screen appears.



- 4 Set the print mode.
- ① Select the item to be set by pressing the ^ or v button.
 - ② Select the method for making a printout by pressing the < or > button.



Switch the desired mode to green by pressing the < or > button.

Item for memory mode	When you select	Settings	Content of settings
SEPARATE	To decide whether the images are printed with white borders	OFF	without white borders
		ON	with white borders
DUP IMAGE	To decide how many times identical images are printed in a single printout.	OFF	Printing a memory image one time
		2	Printing a memory image twice.
		4	Printing a memory image four times
		16	Printing a memory image 16 times.
MIRROR	To rotate the image around its vertical axis (to make a mirror image printout)	OFF	Normal image
		ON	Mirror image

Note

When MIR is selected on the CAPTION sub menu, MIRROR is not selected.

- 5 Press the MENU button.
The regular screen appears.

To return to the main menu from the sub menu screen

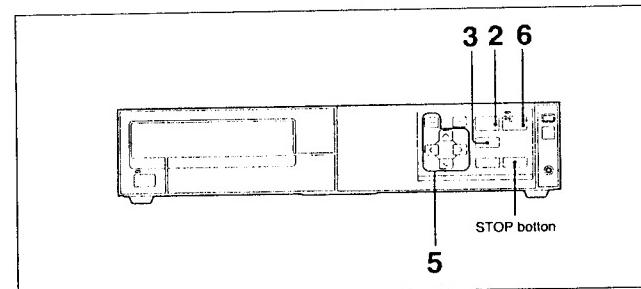
Press the EXEC button except when the SAVE item is selected on the COLOR ADJUST sub menu and when the cursor is position in the character entry area on the CAPTION sub menu.

Making Printouts of Multiple Images

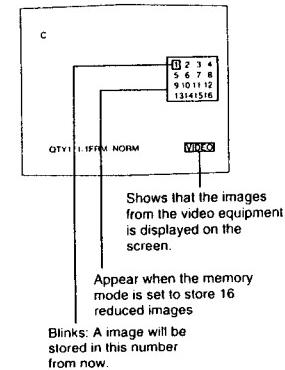
This subsection explains how to make printouts of reduced multiple images taking as an example, making a printout of 16 reduced images. (see "Selecting the Print Mode" page 28)

Before making printouts of 16 reduced images

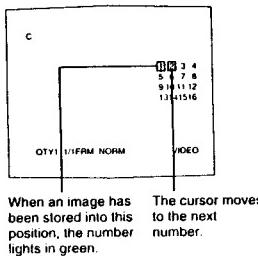
- Set the memory mode to store 16 reduced images into memory. (see page 27)
- Select the appropriate memory page. (see page 25)



- 1 Start the video source.
(This operation is done using the controls of the video equipment acting as the source.)



- 2** Press the MEMORY IN button at the instant when the image you want to print appears on the screen. The image is stored to the position for which the corresponding number blinks on the monitor display. The cursor moves to the next number, then blinks.

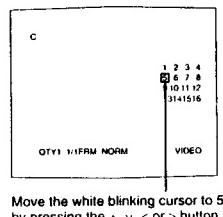


- 3** Press the SOURCE/MEMORY button. The image from the video equipment appears on the monitor display.
- 4** Repeat steps 2 and 3 until you have stored 16 images.

To change a stored image

Example: When you want to change the image stored to the 5th position

- ① Select 5 by pressing the \wedge , \vee , $<$ or $>$ button.
- ② Press the SOURCE/MEMORY button. The image from the video source appears.
- ③ Press the MEMORY IN button at the instant when the image you want to print appears. The previously stored image is replaced with the newly selected image.



To skip a previously stored image

When an image has already been stored, the previously stored image can be replaced by pressing the MEMORY IN button. Skip the number corresponding to the image to be skipped by pressing the \wedge , \vee , $<$ or $>$ button.

- 5** Set the print mode. (see "Selecting the Print Mode" page 28)

- 6** Press the PRINT button.
The 16 reduced images are printed on one sheet of paper.

To stop printing midway

Press the STOP button. The printer stops printing and ejects paper to the paper cover.

Making Printouts with an Insert

You can make printouts with an insert by using the four- or 16-reduced image memory mode.

To make printouts with an insert, select the memory to FIELD.

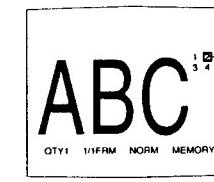
Example: To make a printout with one of four reduced images inserted

- 1** Display the full-size image stored in memory. (Follow steps 1 to 3 of "Making Full-Size Printouts" on page 14)

- 2** Set the memory mode to store four reduced images. (see "Selecting the Memory Mode" page 26)

- 3** Move the white blinking cursor to the position where a reduced image is to be inserted, by pressing the \wedge , \vee , $<$ or $>$ button.

Example: To insert the image to 2



Move the white blinking cursor to 2.

- 4** Press the SOURCE/MEMORY button to display the image from the video source, if necessary.

- 5** Press the MEMORY IN button at the instant when the image you want to print appears. The image is stored to position 2.

- 6** Press the PRINT button.
An image with the insert is printed.

Note

If you insert a reduced image into an image stored in a different memory page, the printer can not make a printout of the image with an insert.

1-7. MAKING PRINTOUTS WITH A CAPTION

A caption, such as data or comments, can be added to a printout, using small characters below the image.
You can input up to 60 characters in NARROW size mode, NORMAL size mode, in WIDE size mode.

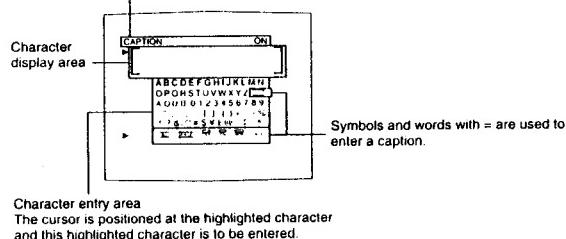
Note

When the printout is printed in field mode, characters may not be printed clearly.

About the CAPTION sub menu

A caption is entered from the CAPTION sub menu. A brief explanation of each item on the CAPTION sub menu, is given below before entering a caption.

CAPTION ON: displayed when printing with a caption
CAPTION OFF: displayed when printing without a caption
CAPTION MIR: displayed when printing with mirror characters



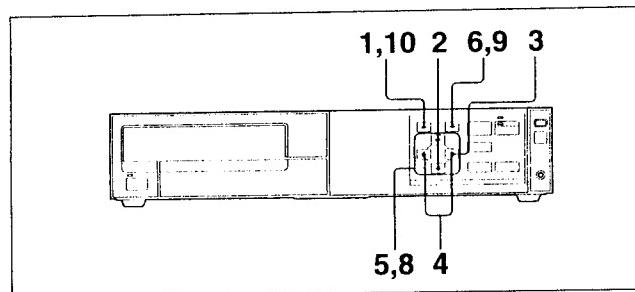
Symbols and words with = used to enter a caption.

Monitor display	Function
SPACE	One space
BS	One backspace
OFF	Selecting to print without a caption
ON	Selecting to print with a caption
MIR	Selecting to print with a mirror caption
SHIFT ^{a)}	Selecting either capital letters or lower-case letters
SAVE	Storing the entered caption

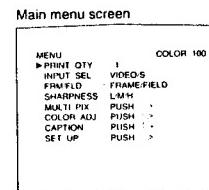
- a) By highlighting SHIFT and pressing the EXEC button, capital letters are changed to lower-case letters, or lower-case letters are changed to capital letters.

Entering a Caption

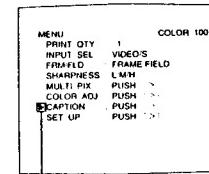
Enter a caption as follows. The setting remains valid until you enter a new setting - even if you turn the power off.



- 1 Press the MENU button.
The right screen appears.

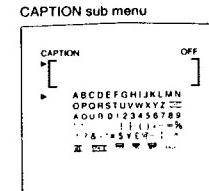


- 2 Select CAPTION by pressing the \wedge or \vee button.

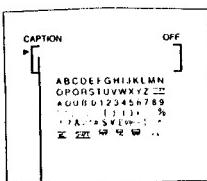


Move the cursor to CAPTION by pressing the \wedge or \vee button.

- 3 Press the > button.
The right screen appears.

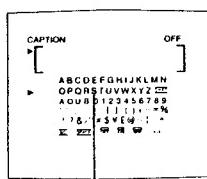


- 4 Select the position where you want to enter the character in the character display area by pressing the < or > button.



The cursor □ is highlighted at the selected position on the monitor display.

- 5 Select the character you want to enter by pressing the ^, v, < or > button.
Example: To select S



Highlight S.

- 6 Press the EXEC button.

The selected character appears at the position highlighted on the character display area, then the highlighted [] moves to the next position.

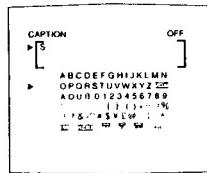
When you enter a wrong character

Select BS by pressing the ^, v, < or > buttons, then press the EXEC button. The character to the left of highlighted character will be deleted.

- 7 Repeat steps 4, 5 and 6 to enter the remaining characters of the caption.

To make a space

- ① Move the highlighted [] to the position where you want to make a space.
- ② Select SPACE by pressing the ^, v, < or > button.
- ③ Press the EXEC button.
The one space is made and the cursor moves to the next position.



Continue to next page →

To replace a previously entered character without changing the number of characters

You can replace a previously entered character with a new one.

- ① Move the cursor to the character which you want to replace by the operation in step 4.
- ② Enter the correct character over the wrong character by the operations in step 5 and 6.
The previously entered character is replaced with the new one.

- 8 Select SAVE by pressing the ^, v, < or > button.



Highlight SAVE.

- 9 Press the EXEC button.

The message "PLEASE WAIT" appears while the entered characters are being stored. Once they have been stored, the message disappears and the CAPTION sub menu appears again.

- 10 Press the MENU button.
The regular screen appears.

Note

The message "PLEASE WAIT" appears when it is not allowed to operate the printer or to operate the printer remotely by using the remote commander. Do not operate the printer while "PLEASE WAIT" is being displayed.

If "PLEASE WAIT" does not disappear

If "PLEASE WAIT" remains on the screen, turn the printer power off once and turn the printer power on again. You can operate the printer.

Making printouts with a caption

Display the CAPTION input screen. (see "Entering a Caption" page 34)

- 1 Select ON by pressing the ^, v, < or > button.



Highlight ON.

- 2 Press the EXEC button.

Making a printouts without a caption

Select OFF in the above step 1.

1-8. SUPPLIED ACCESSORIES

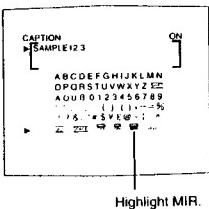
Making a printout with a mirror caption

Display the CAPTION input screen. (see "Entering a Caption" page 32)

Note

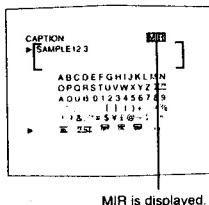
To select MIR on the CAPTION sub menu, the setting of MIRROR on the MULTI PICTURE sub menu should be set to MIRROR ON. Otherwise, if you select MIR on the CAPTION sub menu with setting to MIRROR OFF on the MULTI PICTURE sub menu, error tone sounds three times.

- 1 Select MIR by pressing the \wedge , \vee , $<$ or $>$ button.



Highlight MIR.

- 2 Press the EXEC button.



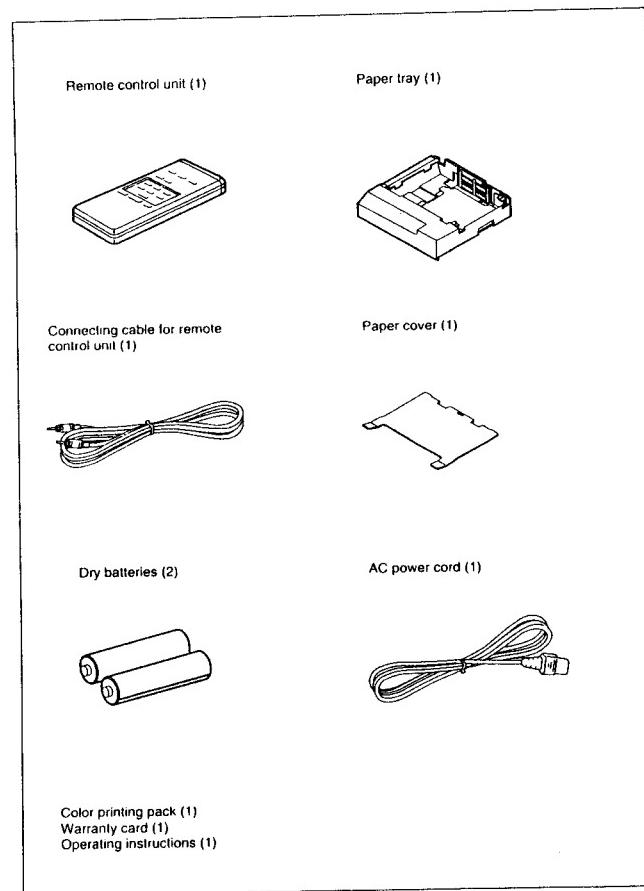
MIR is displayed.

To return the print mode to the one with normal caption

- ① Select ON by pressing the \wedge , \vee , $<$ or $>$ button.
- ② Press the EXEC button.

To return to the regular screen

Press the MENU button.



1-9. CONNECTIONS UP-1200A

To enable printing, video equipment to act as an input signal source, and a video monitor to enable you to view images or menus, must be connected. The following diagrams illustrate how to make the input, output and remote control connections. Use as a guide when connecting the necessary signals to and from the equipment to be used for printing.

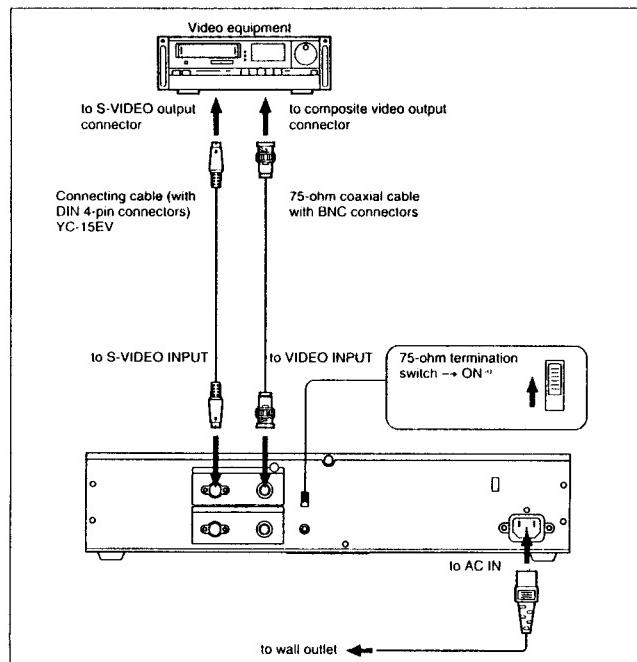
Notes

When connecting:

- Turn off the power of each device before attempting to make any connections.
- Connect the AC power cord last.

Making Connections for Storing Video Images

Connect the video equipment for storing the video images to be printed. Connect the necessary video equipment which will be used in actual printing, using the following diagram as a guide.



- a) Normally, set this switch to ON. Set it to OFF if the level of the input signal drops if you connect additional video equipment.

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To enable printing, video equipment to act as an input signal source, and a video monitor to enable you to view images or menus, must be connected. The following diagrams illustrate how to make the input, output and remote control connections. Use as a guide when connecting the necessary signals to and from the equipment to be used for printing.

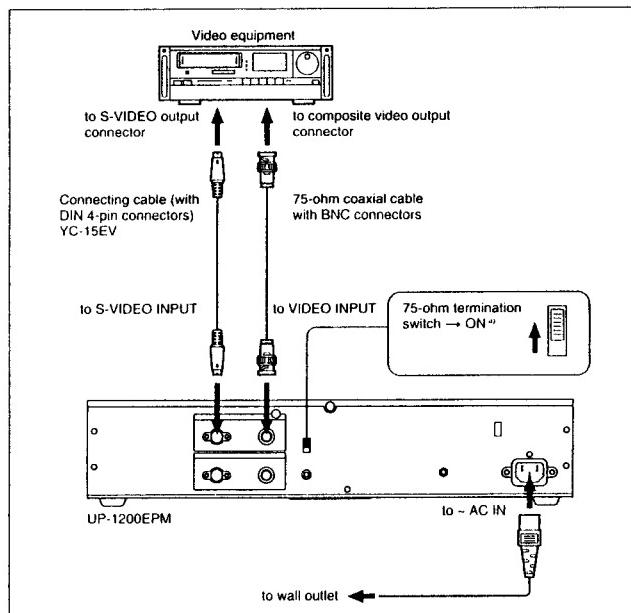
Notes

When connecting:

- Turn off the power of each device before attempting to make any connections.
- Connect the AC power cord last.

Making Connections for Storing Video Images

Connect the video equipment for storing the video images to be printed. Connect the necessary video equipment which will be used in actual printing, using the following diagram as a guide. Before connecting the video equipment, see "Important safeguards/notices for use in the medical environment" on page 2.

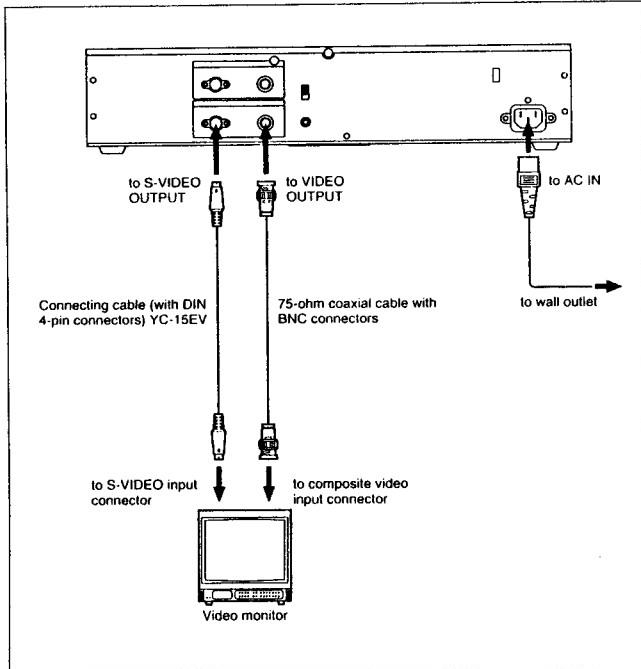


- a) Normally, set this switch to ON. Set it to OFF if the level of the input signal drops when you connect additional video equipment.

UP-1200A

Making Connections for Viewing Images to be Printed on the Video Monitor

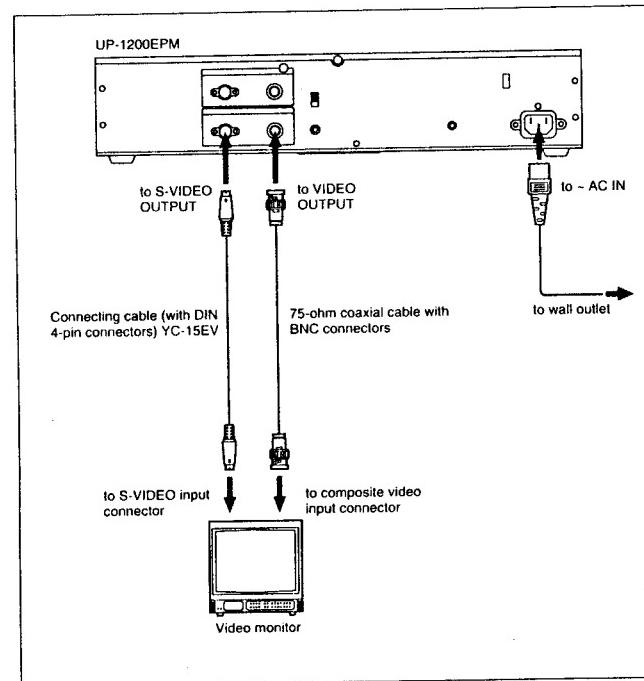
Connect a video monitor to view stored images and to check those to be printed. Connect the necessary video monitor which will be used in actual printing, using the following diagram as a guide.



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Making Connections for Viewing Images to be Printed on the Video Monitor

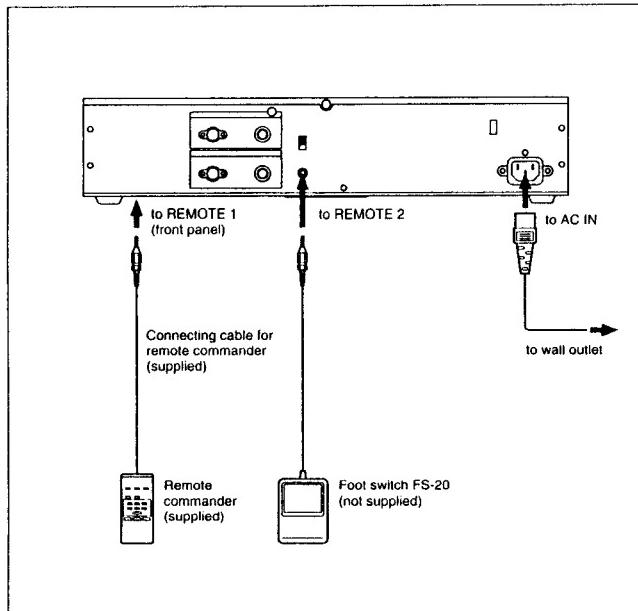
Connect a video monitor to view stored images and to check those to be printed. Connect the necessary video monitor which will be used in actual printing, using the following diagram as a guide. Before connecting the video monitor, see "Important safeguards/notices for use in the medical environment" on page 2.



UP-1200A

Making Connections to Enable Remote Control

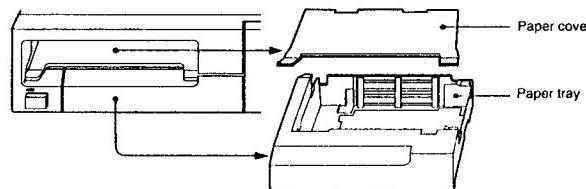
The printer can be controlled remotely by connecting the remote commander (supplied) or foot-switch (not supplied) (see "Preparing the Remote Commander" page 42).



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Assembly

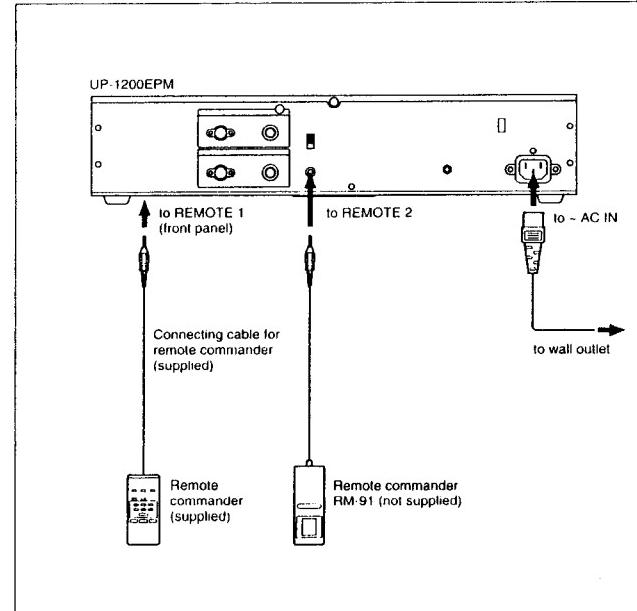
Mount the supplied paper tray and paper cover.



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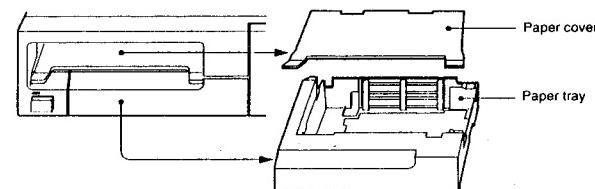
Making Connections to Enable Remote Control

The printer can be controlled remotely by connecting the remote commander (supplied) or the RM-91 remote commander (not supplied) (see "Preparing the Remote Control Units" page 42).



Assembly

Mount the supplied paper tray and paper cover.



1-10. PREPARING THE REMOTE COMMANDERS **UP-1200A**

You can control the printer remotely by using the remote control unit (supplied) or the foot switch (not supplied).

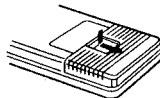
Using the Supplied Remote Commander

The remote control unit can be used either as a wireless type or wired type. The buttons on the remote control unit duplicate those on the front panel of the printer, except for the PRINT QTY button, COLOR ADJUST button and MULTI PICTURE button. (see "Remote Commander" page 72)

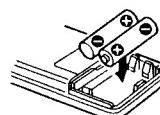
Inserting batteries

Install the batteries in the remote commander before using it.

- 1 Remove the battery compartment cover.



- 2 Insert the two supplied SUM-3 1.5 V batteries.
Note the polarity. Be careful to insert the batteries correctly.



- 3 Replace the cover.

Battery life

The battery life depends on how much you use the remote control unit. On average, batteries last for about 6 months. Install fresh batteries as soon as you notice the unit's range becoming shorter.

Notes

When using the batteries:

- Remove the batteries from the remote control unit if you do not intend to use it for an extended period of time. The batteries may leak if you leave them in the remote control unit.
- Should the batteries leak, clean the battery case thoroughly with a soft cloth and install fresh batteries.
- Be careful to insert the batteries correctly. Note the polarity, as indicated inside the battery compartment.
- Replace exhausted batteries with fresh ones. Never mix a fresh battery with a used battery or with a different kind of battery.

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You can control the printer remotely by using the remote commander (supplied) or the remote commander (not supplied).

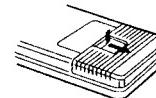
Using the Supplied Remote Commander RM-5100

The remote commander can be used either as a wireless type or wired type. The buttons on the remote commander duplicate those on the front panel of the printer, except for the PRINT QTY button, COLOR ADJUST button and MULTI PICTURE button. (see "Remote Commander RM-5100" page 72)

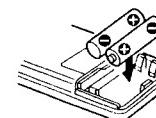
Inserting batteries

Install the batteries in the remote commander before using it.

- 1 Remove the battery compartment cover.



- 2 Insert the two supplied 1.5 V batteries (R6).
Note the polarity. Be careful to insert the batteries correctly.



- 3 Replace the cover.

Battery life

The battery life depends on how much you use the remote commander. On average, batteries last for about 6 months. Install fresh batteries as soon as you notice the unit's range becoming shorter.

Notes

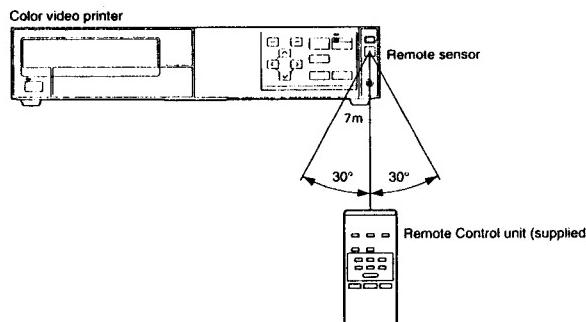
When using the batteries:

- Remove the batteries from the remote commander if you do not intend to use it for an extended period of time. The batteries may leak if you leave them in the remote control unit.
- Should the batteries leak, clean the battery case thoroughly with a soft cloth and install fresh batteries.
- Be careful to insert the batteries correctly. Note the polarity, as indicated inside the battery compartment.
- Replace exhausted batteries with fresh ones. Never mix a fresh battery with a used battery or with a different kind of battery.

UP-1200A

Using the supplied remote control unit

When using the remote control unit as a wireless unit, aim the head of the remote control unit of the remote sensor on the printer. With fresh batteries, the range of the remote control unit is about 7 meters.



Using the Foot Switch

The foot switch (not supplied) allows you to make prints free-handed.

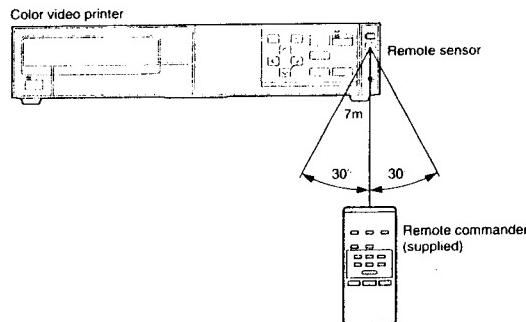
Operation

At the instant when the image you want to print is displayed on the monitor, press the foot switch. The subsequent operation of the printer will depend on the remote operation setting with the corresponding menu. (see "Selecting Operation Mode for Automatic Printing Capabilities" page 54) The printer operation, also, can be controlled remotely by sending a pulse signal to the REMOTE 2 connector. (see "Specifications" page 65)

UP-1200AEPM

Using the supplied remote commander

When using the remote commander as a wireless unit, aim the head of the remote control unit of the remote sensor on the printer. With fresh batteries, the range of the remote commander is about 7 meters.



Using the Remote Commander (Not Supplied)

The RM-91 remote commander (not supplied) allows you to make printouts remotely.

Operation

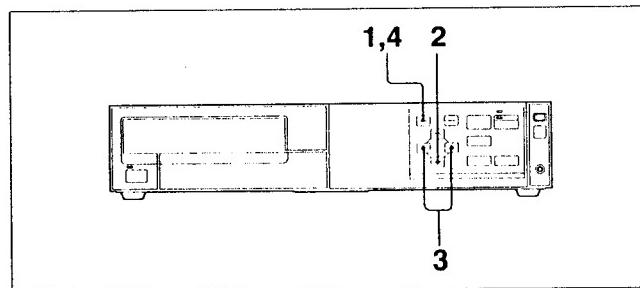
At the instant when the image you want to print is displayed on the monitor, press the switch of the remote commander. The subsequent operation of the printer will depend on the remote operation setting with the corresponding menu. (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 54) The printer operation, also, can be controlled remotely by sending a pulse signal to the REMOTE 2 connector. (see "Specifications" page 65)

1-11. ADJUSTING THE PRINTOUT QUALITY

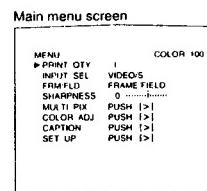
You can adjust the printout quality, including its sharpness and color (intensity and contrast) and store these settings by using the menu. The setting remains as is until reset - even if you turn off the power.

Adjusting the Sharpness

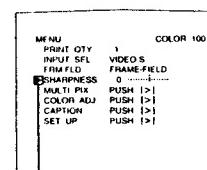
You can set the printout sharpness to one of 16 levels. A printout will appear softer or sharper depending on the definition of the subject outline. The image on the monitor is not affected by changing the sharpness setting. This adjustment affect only the quality of the printout. The setting remains as is until reset - even if you turn off the power.



- 1** Press the MENU button.
The right screen appears.



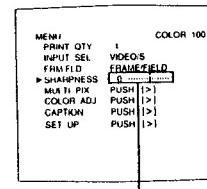
- 2** Select SHARPNESS by pressing the \wedge or \vee button.



Move the cursor to SHARPNESS by pressing the \wedge or \vee button.

- 3** Select desired sharpness by pressing the $<$ or $>$ button.

Desired sharpness	Direction
Soft outline	to the - direction
Normal outline	Centered (0 position)
Sharp outline	to the + direction



The number and the corresponding sharpness increases by pressing the $>$ button.
The number and the corresponding sharpness decreases by pressing the $<$ button.

- 4** Press the MENU button.
The regular screen appears.

Adjusting the Printout Color

This subsection explains how to adjust the printout color. You can adjust the color intensity (RED/GREEN/BLUE) and contrast (DARK/LIGHT). The new setting remains as is until reset - even if you turn off the power.

You can store up to three settings. These settings are managed according to a LOAD number. The color intensity and picture contrast of a printout are determined by recalling one of the three settings according to their LOAD numbers. The printer retains these settings even if you turn off the power. This is useful when you are using more than one video equipment, each of a different quality, and when you want to print images having different color qualities and picture contrasts. Also, you can make a printout using temporarily set values, without erasing the stored adjustment values. Perform the adjustments while viewing the images stored in memory.

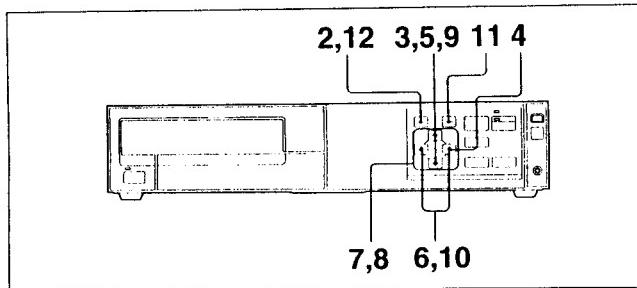
Factory-set values of LOAD numbers 1, 2 and 3 in the COLOR ADJUST sub menu

For UP-1200, all values are factory-set to 0 for LOAD numbers 1, 2 and 3. For UP-1200A, all values are factory-set to 0 for LOAD numbers 1 and 3. Values for LOAD number 2, however, are factory-set as follows: RED is set to -3, GREEN to -3, BLUE to -3, DARK to +3 and LIGHT to 0. By selecting LOAD number 2 under the factory-setting, you can make a printout in the same printout color as the one of the UP-1200 where RED, GREEN, BLUE, DARK and LIGHT are set to 0.

When you control the printer using the remote control unit (supplied)

You can directly access the COLOR ADJUST sub menu from the regular screen by pressing the COLOR ADJUST button. Therefore, press the COLOR ADJUST button first. Then, perform the operation from step 5 of the following procedure.

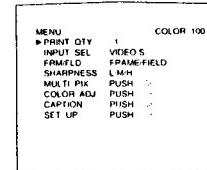
Continue to next page →



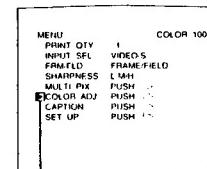
- 1** Display the image stored in monitor for adjustment.

- 2** Press the MENU button.
The right screen appears.

Main Menu screen

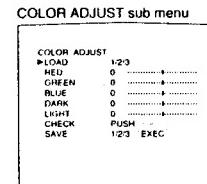


- 3** Select COLOR ADJ by pressing the ▲ or ▼ button.

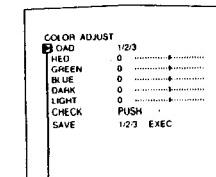


Move the cursor to COLOR ADJ by pressing the ▲ or ▼ button.

- 4** Press the > button.
The right screen appears.



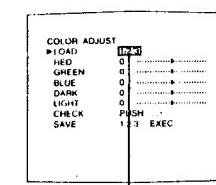
- 5** Select LOAD by pressing the ▲ or ▼ button.



Move the cursor to LOAD by pressing the ▲ or ▼ button.

- 6** Select the LOAD number of the value to be adjusted or to be modified by pressing the < or > button.

When modifying, you can preserve the original settings. (see "To preserve the original set value" page 47)



Switch the desired LOAD number to green by pressing the < or > button

- 7** Adjust the printout color.

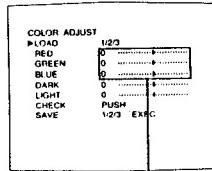
- ① Select the item to be set by pressing the ▲ or ▼ button.
- ② Perform the adjustment by pressing the < or > button.

Adjustment item	Contents of setting	
Color intensity	RED GREEN BLUE	Adjusting the red component of the image Adjusting the green component of the image Adjusting the blue component of the image
Color contrast	DARK LIGHT	Adjusting the dark area of an image Adjusting the light area of an image

The RED, GREEN and BLUE color components and the contrast are divided into 16 scales from -8 to +7, as indicated by a value and graph. And the center of the graph corresponds to the standard color.

Continue to next page →

When adjusting RED/GREEN/BLUE



The intensity increases in the + direction by pressing the > button. The intensity decreases in the - direction by pressing the < button.

Once you have changed the value

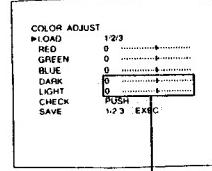
Once you have changed the value, TEMP (TEMPORARY) appears to the right of the LOAD item. TEMP indicates that the setting is temporary and not stored.

- 8** After you have made all necessary adjustments, check your presettings.
 ① Select CHECK by pressing the ^ or v button.
 ② Press the > button.
 For as long as you keep the > button held down, the display does not appear on the screen.

You can make a printout with the settings made as above. Go to step 12 to make a printout. However, this setting is cleared when you turn the printer off or you select another preset. To store a new setting, go to the next step.

- 9** Select SAVE by pressing the ^ or v button.

When adjusting DARK/LIGHT

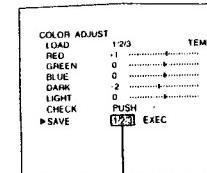


The contrast in the dark area or light area is strengthened in the + direction by pressing the > button. The contrast in the dark area or light area is weakened in the - direction by pressing the < button.

- 10** Select the SAVE number to which new settings are to be stored by pressing the < or > button.

To preserve the original set value

Select the SAVE number which differs from the LOAD number selected in step 6.



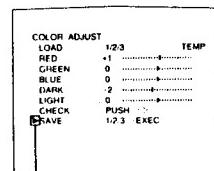
Switch the desired SAVE number to green by pressing the < or > button.

- 11** Press the EXEC button.
 The settings have been registered to the SAVE number selected in step 10.
 TEMP disappears from the LOAD item.

- 12** Press the MENU button.
 The regular screen appears.

To recall settings

You can recall previously set values by selecting the LOAD number. The values are stored to SAVE numbers in steps 10 and 11. This SAVE number is the LOAD number for this setting.



Move the cursor to SAVE by pressing the ^ or v button.

1-12. PRINTER INITIAL SETUP

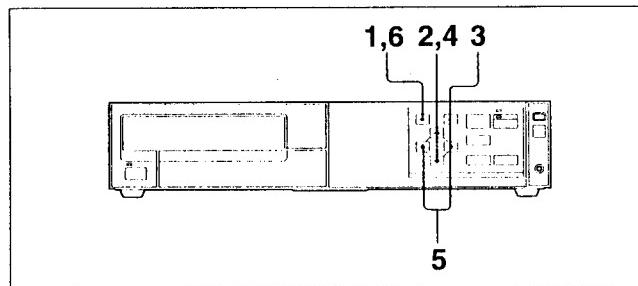
You can set up the following, using the on-screen menu.

- Setting the printout size (see page 50)
- Changing the printout area (see page 52)
- Selecting the operation mode for automatic printing capabilities (see page 54)
- Erasing the screen display (see page 56)
- Viewing images from connected video equipment on the video monitor (see page 58)
- Selecting images on the video monitor after storing the video image into memory (see page 60)

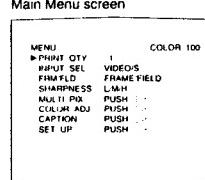
Setting the Printout Size

When you print an image that is narrower or wider than the standard screen size, the black frame may be printed or the image may be partially cut. In such a case, you can change the screen size.

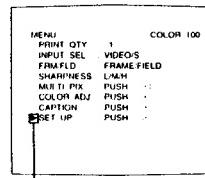
The printer supports the following three sizes, NA (NARROW), NO (NORMAL) and W (WIDE).



- 1** Press the MENU button.
The right screen appears.

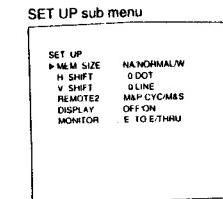


- 2** Select SET UP by pressing the \wedge or \vee button.



Move the cursor to SET UP by
pressing the \wedge or \vee button.

- 3** Press the $>$ button.
The right screen appears.

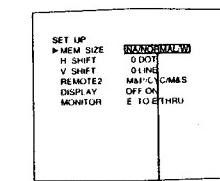


- 4** Select MEM SIZE by pressing the \wedge or \vee buttons.



Move the cursor MEM SIZE by
pressing the \wedge or \vee button.

- 5** Select the desired size by pressing the $<$ or $>$ buttons.



Switch the selected size to green.
The selected size appears in
green.

When changing	Printout size	Size (dots \times line)
When a black frame is printed.	NA (NARROW)	708 (H) \times 448 (V)
Normal	NO (NORMAL)	720 (H) \times 472 (V)
When an image is partially cut	W (WIDE)	772 (H) \times 488 (V)

- 6** Press the MENU button.
The regular screen appears.

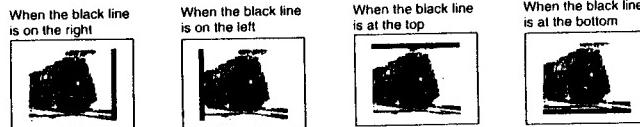
Note
To change the printout size, turn the power off after removing from the SET UP sub menu (after completing step 6 in the above operation procedures). If you keep the power on, the former setting remains.

To check the adjustment result
Store a new image to the memory and print it to check whether the black frame disappears.

Changing the Printout Area

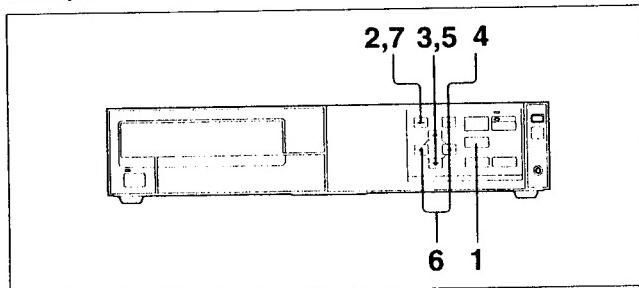
The black line may be printed on the printout although it does not appear on the video monitor. The portion where no video signal exists is printed in black. This may occur when you make printouts after you connect a different video source or play back different video software.

In such a case, you can adjust the printout area by moving the screen horizontally and vertically.



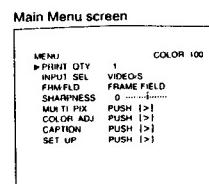
Note

When the printout size is set to WIDE, the screen size cannot be adjusted vertically. (see "Setting the Printout Size" page 50)

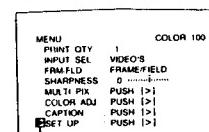


- When the memory image is displayed on the screen, press the SOURCE/MEMORY button.
The image from the video source appears.

- Press the MENU button.
The right screen appears.



- Select SET UP by pressing the \wedge or \vee button.



Move the cursor to SET UP by pressing the \wedge or \vee button.

- Press the $>$ button.
The right screen appears.

SET UP sub menu

SET UP	NA-NORMAL/W
H SHIFT	0 DOT
V SHIFT	0 LINE
FMT MODE	MAP/CYC/M&S
FMT ACT	FACT/FACT
DISPLAY	OFF ON
MONITOR	E TO E THRU
LIVE MODE	OFF ON

- Select H SHIFT by pressing the \wedge or \vee buttons, when the black line appears on the right or left.
Select V SHIFT by pressing the \wedge or \vee buttons, when the black line is at the top or bottom.

SET UP	NA-NORMAL/W
H SHIFT	0 DOT
V SHIFT	0 LINE
FMT MODE	MAP/CYC/M&S
FMT ACT	FACT/FACT
DISPLAY	OFF ON

When the black line is at
the right or left When the black line is at
the top or at the bottom

- Adjust the horizontal value or vertical value by pressing the $<$ or $>$ button.

Item selected in step 5	The position where the black line appears	Button to be used	Operation
H SHIFT (horizontal direction)	On the right	> button	Shifting the image to the right by up to 14 dots in step 2 dots
	On the left	< button	Shifting the image to the left by up to 14 dots in step 2 dots
V SHIFT (vertical direction)	At the top	> button	In frame mode, shifting the image up by up to 6 lines in step 2 lines In field mode, shifting the image up by up to 3 lines in step 1 line.
	At the bottom	< button	In frame mode, shifting the image down by up to 6 lines in step 2 lines In field mode, shifting the image down by up to 3 lines in step 1 line.

- Press the MENU button.
The regular screen appears.

To check the adjustment result

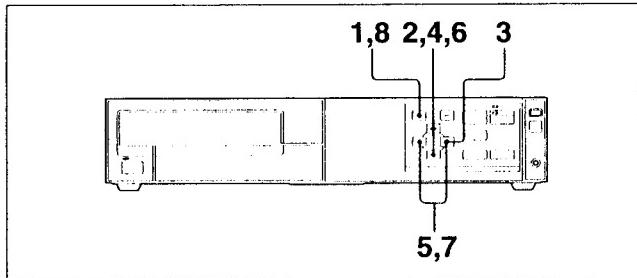
Any black line is also stored in memory with the previous image. Thus, store a new image to the memory and print it to check whether the black line disappears.

Note

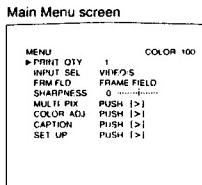
When a black line still remains even after adjusting H SHIFT or V SHIFT, change the printout size. (see "Setting the Printout Size" page 50)

Selecting the Operation Mode for Automatic Printing Capabilities

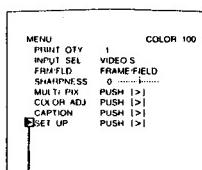
You can control the printer with the RM-91 remote commander connected to the REMOTE 2 connector on the rear panel.
In addition to the above, the printer can be remotely controlled by the pulse signal input to REMOTE 2. (see page 65)



- 1 Press the MENU button.
The right screen appears.

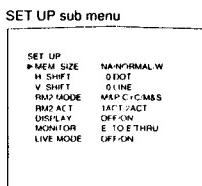


- 2 Select SET UP by pressing the ▲ or ▼ button.

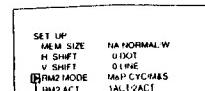


Move the cursor to SET UP by pressing the ▲ or ▼ button.

- 3 Press the > button.
The right screen appears.

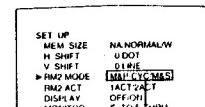


- 4 Select RM2 MODE by pressing the ▲ or ▼ button.



Move the cursor to RM2 MODE by pressing the ▲ or ▼ button.

- 5 Select the desired operation method by pressing the < or > button.



Switch the desired operation method to green.

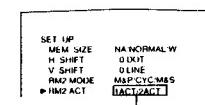
Type of control operation	Operation method
M & P (MEMORY & PRINT)	Storing an image into memory page and printing memory image. When you have selected the field mode, when the printer starts printing, an image is queued and printed as soon as the current printing job has been completed.
CYC (CYCLIC MEMORY)	Storing images to memory page cyclically whenever you press the switch of the remote commander. The printer continues to store images, replacing previously stored images with the new one.
M & S (MEMORY & STOP)	Storing an image to memory page whenever you press the switch of the remote commander. The printer stops storing images to memory page once images have been stored to all memory pages. The Message STOP STOP STOP appears.

- 6 Select RM2 ACT by pressing the ▲ or ▼ button.



Move the cursor to RM2 ACT by pressing the ▲ or ▼ button.

- 7 Select the desired operating condition by pressing the < or > button.



Switch the desired operating condition to green.

Operating condition type	Operating condition
1ACT	Whenever you press the switch, the printer stores an image. You cannot check the image to be stored next.
2ACT	Whenever you press the switch, the printer stores an image. You can check the image to be stored next.

- 8 Press the MENU button.
The regular screen appears.

Continue to next page →

To make the message STOP STOP STOP disappear

When the message STOP STOP STOP is displayed on the video monitor, buttons except the STOP button become disable to operate.
Press the STOP button. The printer is reset to the normal printing mode.

Using the remote commander (not supplied) effectively

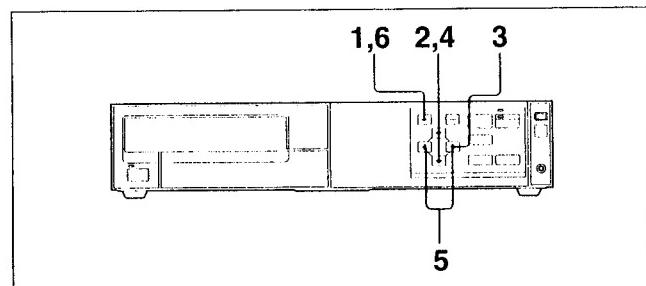
This function is effective when you store four reduced images or 16 reduced images. Whenever you press the foot switch, the image is stored into each position. For example, when M & P is selected with setting to store four reduced images, the printer stores fourth reduced image and starts to make a printout of four reduced images at fourth time foot switch pressing.

Note

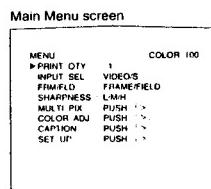
If frame mode is selected, the printer does not store any image even thou you press the foot switch when the printer is printing.

Erasing the Screen Display

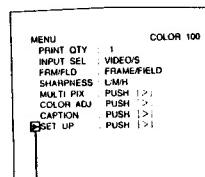
You can erase a screen display with the menu, when, for example, it is hard to see the image that is hidden behind the screen display (C, QTY, VIDEO, and others). The printer operation is identical, regardless of whether messages are displayed on the screen.



- 1 Press the MENU button.
The right screen appears.

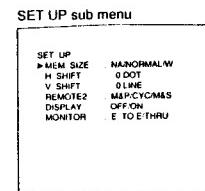


- 2 Select SET UP by pressing the ▲ or ▼ button.

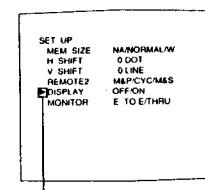


Move the cursor to SET UP by pressing the ▲ or ▼ button.

- 3 Press the > button.
The right screen appears.

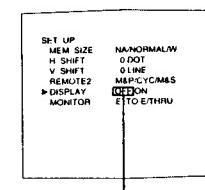


- 4 Select DISPLAY by pressing the ▲ or ▼ button.



Move the cursor to DISPLAY by pressing the ▲ or ▼ button.

- 5 Select OFF by pressing the < or > button.



Switch to green.

- To display screen message
In step 5, select ON.

- Note**
If you set the printer output signal specification to THRU (through), screen display do not appear, even when you switch ON to green.

- 6 Press the MENU button.
The regular screen appears.

Viewing Images from Connected Video Equipment on the Video Monitor

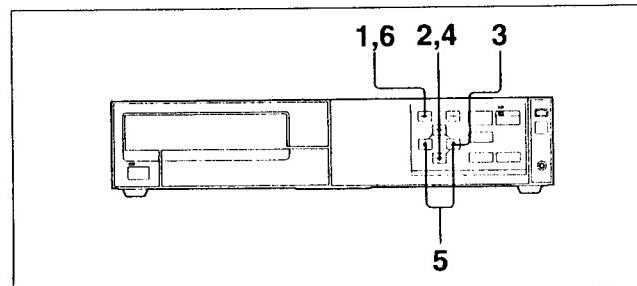
You can view images of the signals from connected video equipment without processed in the video printer.

The printer outputs either of two kinds of video signals according to the MONITOR setting of the SET UP menu.

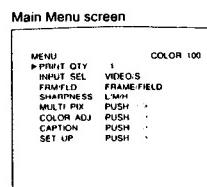
E TO E: Signals are output to the monitor after being processed by the printer's circuitry

THRU (through): Signals are output to the monitor as is

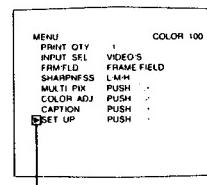
At the factory, the printer is set to E TO E. By changing to THRU, you can view the image with good quality without signal-processed in the printer.



- 1 Press the MENU button.
The following screen appears.

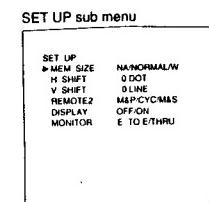


- 2 Select SET UP by pressing the ▲ or ▼ button.

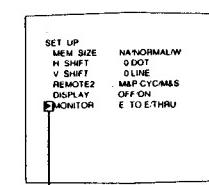


Move the cursor to SET UP by
pressing the ▲ or ▼ button.

- 3 Press the > button.
The right screen appears.

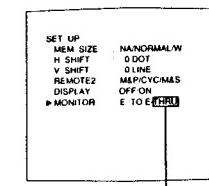


- 4 Select MONITOR by pressing the ▲ or ▼ button.



Move the cursor to MONITOR by
pressing the ▲ or ▼ button.

- 5 Select THRU by pressing the < or > button.



Switch to green.

- 6 Press the MENU button.
The regular screen appears.
The image of the signal directly from the signal source (connected video equipment), which does not pass through the printer circuit, is displayed on the video monitor.

Note

When menu or screen display appears on the video monitor, the memory image is displayed on the monitor. Display the image from the video equipment on the video monitor by pressing the SOURCE/MEMORY button.

When the color of the video monitor is not correctly adjusted
Adjust the color of the video monitor by using the monitor controls.

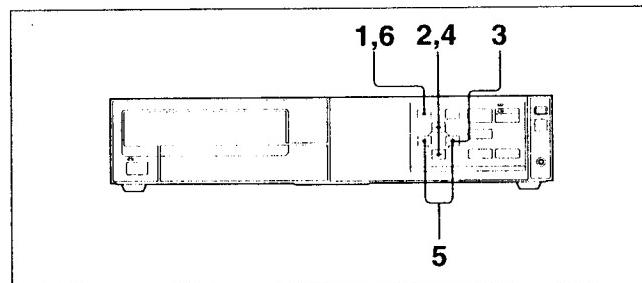
Selecting Images on the Video Monitor After Storing the Video Image into Memory

The printer displays either of two kinds of images after images are stored into memory according to the LIVE MODE setting of the SET UP sub menu.

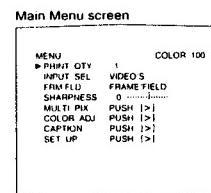
LIVE MODE OFF: Images stored into memory (memory image)

LIVE MODE ON: Images stored into memory at the instant when the image is stored into memory, then video source image after about 1.8 seconds.

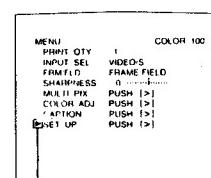
At the factory, the printer is set to LIVE MODE OFF.



- 1** Press the MENU button.
The right screen appears.



- 2** Select SET UP by pressing the \wedge or \vee button.

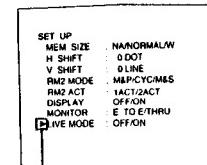


Move the cursor to SET UP by
pressing the \wedge or \vee button.

- 3** Press the $>$ button.
The right screen appears.

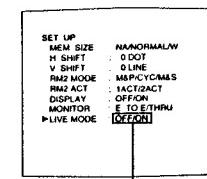


- 4** Select LIVE MODE by pressing the \wedge or \vee button.



Move the cursor to LIVE MODE
by pressing the \wedge or \vee button.

- 5** Select the desired image setting by
pressing the $<$ or $>$ button.



Switch the desired image setting
to green.

LIVE MODE setting	When you select
OFF	To display the memory image (stored into memory) so as to confirm it. You can display the source image by pressing the SOURCE/MEMORY button.
ON	To display the source image. The memory image is displayed at the instant when the image is stored into memory, then after about 1.8 seconds, the source image appears. This setting is effective when storing images continuously without operating the SOURCE/MEMORY button to make multiple reduced printouts.

Note

Pay attentions to the followings when you set LIVE MODE to ON.
You can not perform the following operations while the memory image is being displayed. If so, alarm tone sounds.

- Remote commander operation.
- Deleting images stored into memory.
- PRINT, MEMORY IN, SOURCE/MEMORY and MEMORY PAGE button operation.
However, STOP button and menu control keys are operable.
- When 2ACT of RM2 ACT is selected when selecting the operation mode for automatic printing capabilities, the memory image remains on the screen even if you LIVE MODE is set to ON.

- 6** Press the MENU button.

1-13. ERROR MESSAGES

If a problem occurs, the ALARM lamp lights in orange and an error message and warning message stating the problem appears on the monitor. This section lists messages in alphabetical order, together with their possible causes and remedies. Note the message and act accordingly.

Error/warning message	Possible causes and remedies
CHECK RIBBON SETTING	The front panel (on the right from the user's standpoint) opens accidentally during printing. — Close the front panel. (see page 9)
FEED ERROR	The paper jams as it is being fed into the ribbon area around the paper tray. — Remove the jammed paper from the printer. (see page 67)
HEAD IN COOLING	The thermal head has overheated. — Leave the printer idle and until the head cools and this error message disappears.
NO CARTRIDGE	The ink ribbon cassette is not correctly installed. (see page 8) — Insert the ink ribbon cassette correctly.
NO PAPER	The paper has been exhausted. — Load paper. (see page 10)
PREHEATING	The thermal head is preheating. — Leave the printer until the head has preheated and this message disappears.
REMOVE PRINTS	The paper has jammed near the paper cover. — Remove the jammed paper from the printer. (see page 67)
REMOVE STUCK PAPER	The paper has jammed during printing. — Remove the jammed paper from the printer. (see page 67)
RIBBON & PAPER MISMATCH	The ink ribbon cassette and paper are not compatible. — Use a compatible cassette/paper combination. (see page 64)
RIBBON DOOR OPEN	The front panel (on the right from the user's standpoint) is open. — Close the front panel. (see page 9)
RIBBON END	The ink ribbon cassette has been exhausted. — Insert a new ribbon. (The ink ribbon cassette cannot be reused.) (see page 8)
RIBBON ERROR	An ink ribbon cassette that cannot be used with this printer has been loaded. — Insert the appropriate ink ribbon cassette. (see page 64)

If the message is not cleared, even after completing the necessary remedy

If, after completing the remedy given in "Error Message", the message is not cleared from the video monitor, turn the printer's power off, then back on again. This should allow the printer to again be operated normally.

If ERRORxx appears

If the message "ERROR xx" (xx = error number) appears, perform the following.

- 1 Turn off the power of the printer.
 - 2 Remove the ink ribbon cassette, paper cover and paper tray, and check for any paper jams inside the printer.
(see "Loading an Ink Ribbon Cassette" page 8 and "Loading Paper" page 10)

If you find any jammed paper, remove it carefully.
 - 3 If the ink ribbon cassette cannot be removed, or the jammed paper cannot be removed, contact your Sony service facility.
 - 4 Insert the ink ribbon cassette, paper cover and paper tray to the printer.
- When the message does not appear, you can use the printer as normal. However, the image stored to memory will have been cleared. Store the image to memory again.
- If the same message appears again, the printer must not be operated. Turn off the power immediately and contact your Sony service facility.

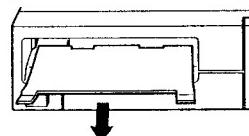
If the Paper Jams

If the paper jams as it is being fed into the ribbon area during printing, or when being fed into the paper cover area, printing stops and a message appears on the monitor, according to where the jam has occurred.

Message	Position where the paper has jammed
FEED ERROR	Before printing and being fed into the ribbon area
REMOVE STUCK PAPER	During printing, inside the printer
REMOVE PRINTS	Instantaneously before completing printing, near the paper cover

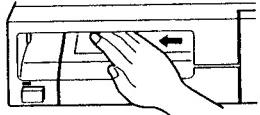
When FEED ERROR appears

- 1 Remove the paper cover.
When any printouts have been ejected on the paper cover, remove those printouts first before removing the paper cover.

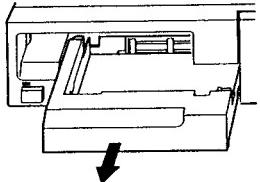


Continue to next page →

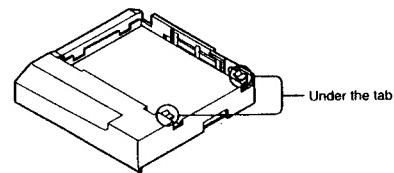
- 2 Check whether any paper is stuck inside the printer. If you find a jammed sheet, slowly pull it into the paper tray.



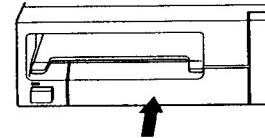
- 3 Remove the paper tray.



- 4 Load the paper into the paper tray correctly.
Discard the paper removed in step 2.



- 5 Slide the paper tray and paper cover back into the printer.



When REMOVE STUCK PAPER appears

Perform the same operation as that performed when FEED ERROR appears. When you cannot remove the jammed paper, remove the ink ribbon cassette too. If you find a jammed sheet inside the printer, remove it carefully.

When REMOVE PRINTS appears

Carefully remove the jammed paper from near the paper cover.

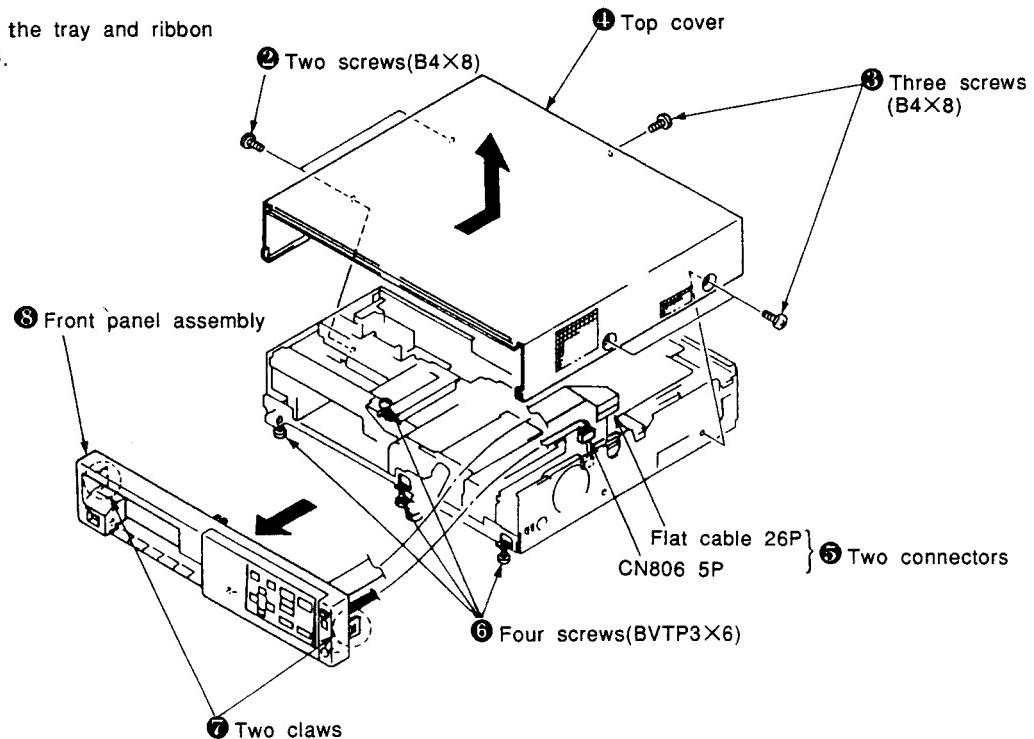
1-14. TROUBLESHOOTING

Symptom	Possible causes and remedies
Nothing appears on the monitor.	<ul style="list-style-type: none">The POWER switch of the printer is not set to ON. → Set the POWER switch of the printer to ON.The POWER switch of the monitor is not set to ON. → Set the POWER switch of the monitor to ON.Connections may not be correct. → Make connections correctly. (see page 39)
Any message does not appear on the regular screen.	If an incorrect sync signal is input, nothing may appear on the monitor. → In this case, check the monitor first by pressing the SOURCE/MEMORY button to display the image stored in memory. If an image appears, the monitor is working correctly. Change the INPUT SELECT settings on the menu screen. (see page 12) Or, set the connected video equipment to playback mode, if it is in another mode such as stop mode.
Any message and image do not appear on the regular screen.	If an image stored in memory appears when the SOURCE/MEMORY button is pressed, the MONITOR settings on the SET UP sub menu is set to THRU. Change the MONITOR settings to E TO E. (see page 59)
The printer does not print.	An error message appears on the display. (see page 66)
A black line appears on the printout.	A portion corresponding to there being no signal is printed in black. → Shift the printout area. (see page 52) Store a new image and print it.
The printer makes a printout with black frame.	A portion corresponding to there being no signal is printed in black. → Change the printout size a to make it narrow. (see page 50) Store a new image and print it.
The printed image is partially cut out.	Only a part of video signal has been stored. → Change the printout size to make it wide. (see page 50) Store a new image and print it.
A caption is not printed clearly.	Printed in field mode. → Store the image in frame mode and print it in frame mode.
The printout is blurred.	The quickly moving image has been stored in frame mode. → Change the mode to field mode, then print it again.

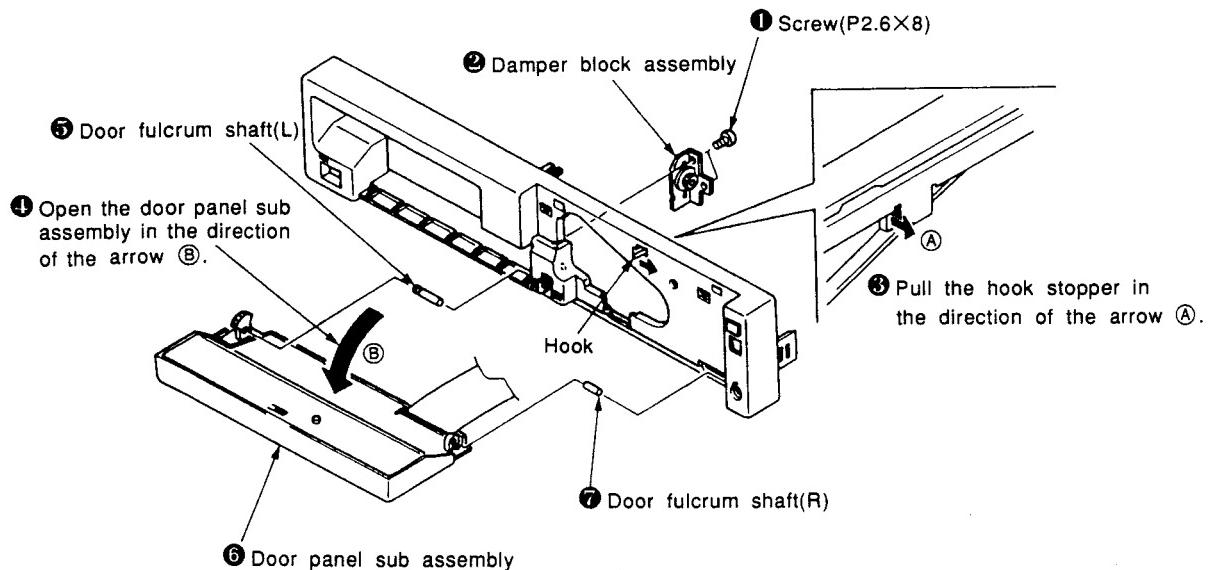
SECTION 2 DISASSEMBLY

2-1. REMOVAL OF CABINET ASSEMBLY

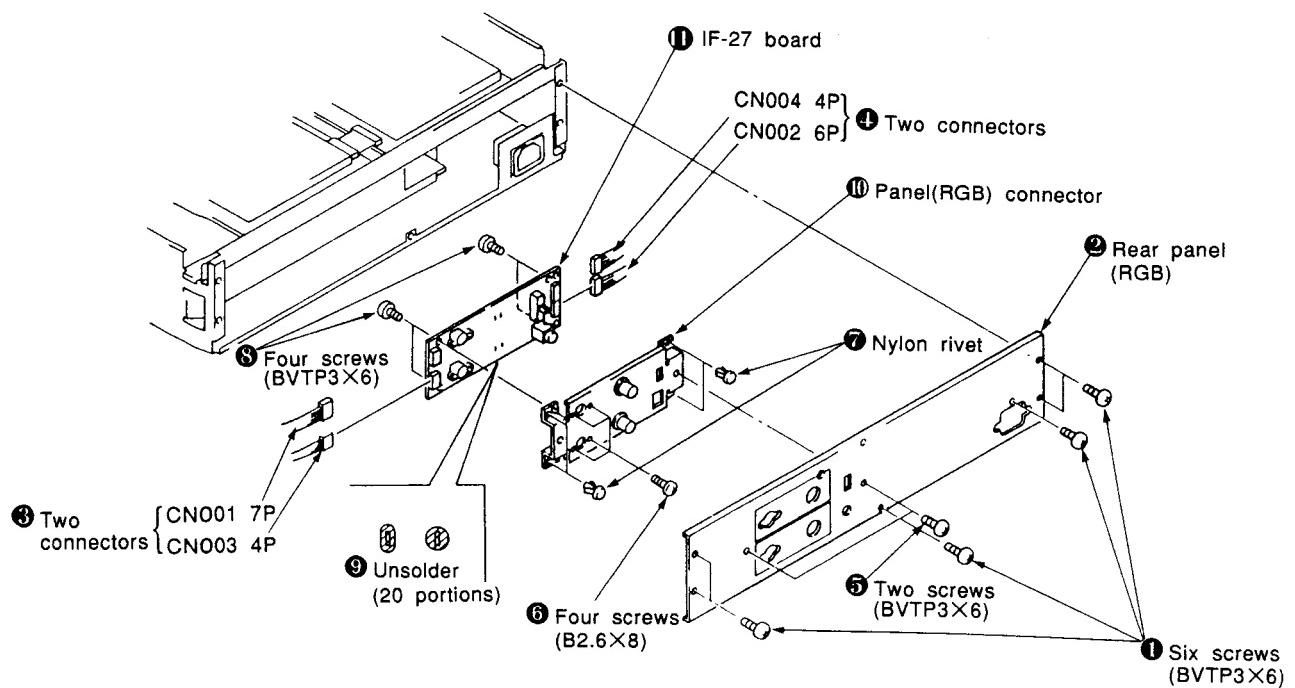
- ① Remove the tray and ribbon cartridge.



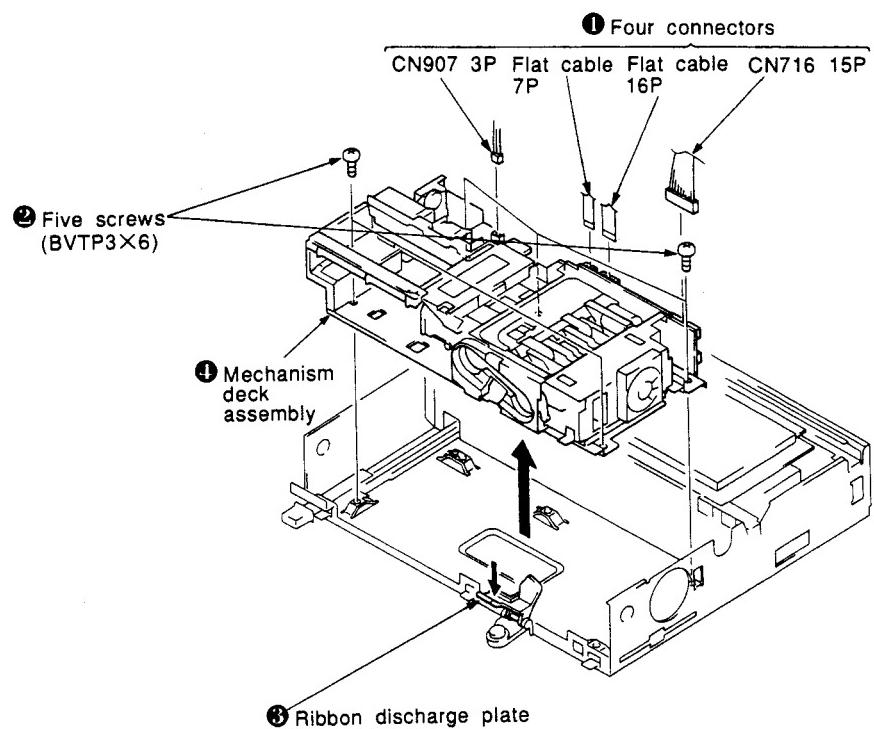
2-2. REMOVAL OF DOOR PANEL SUB ASSEMBLY



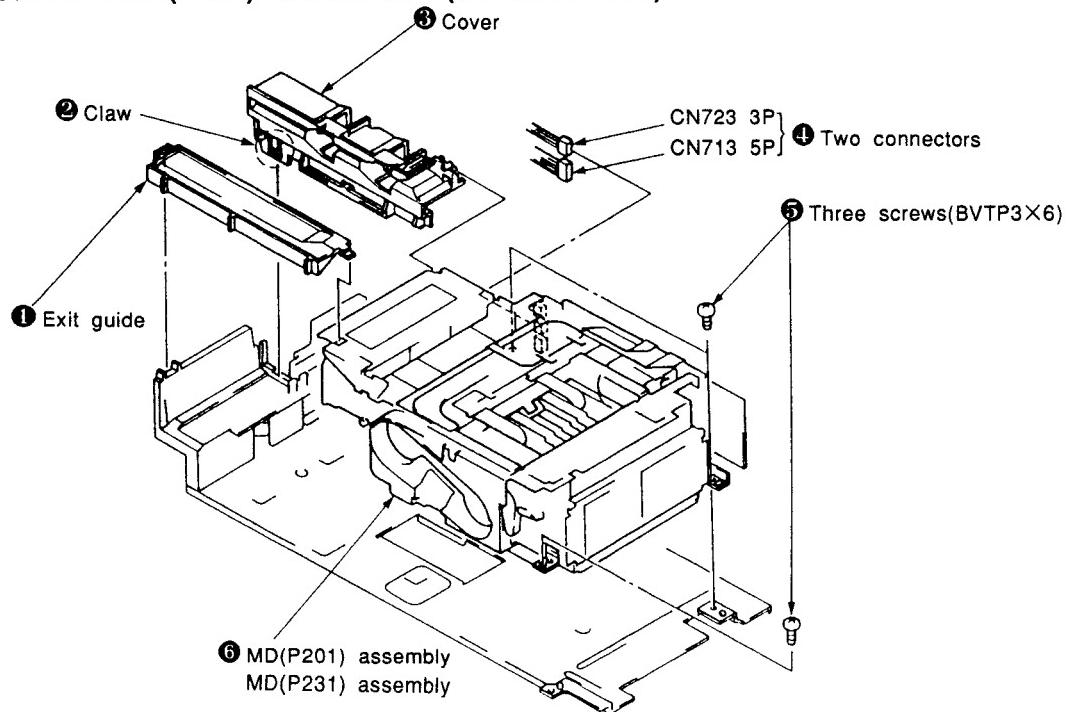
2-3. REMOVAL OF IF-27 BOARD



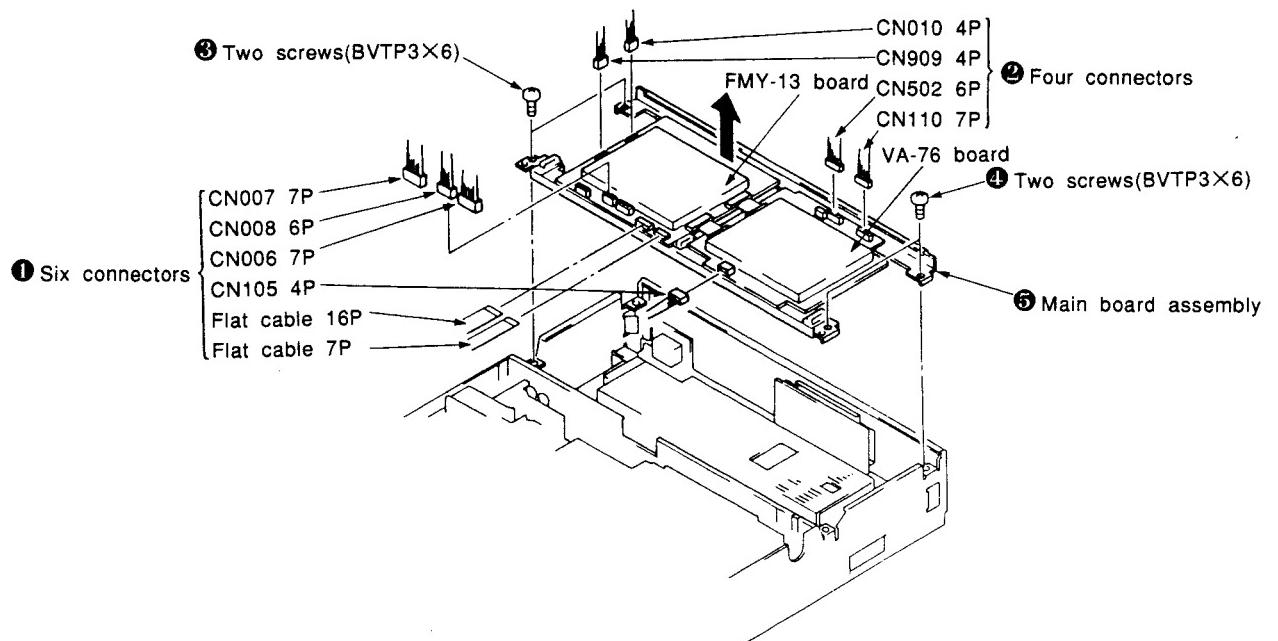
2-4. REMOVAL OF MECHANISM DECK ASSEMBLY



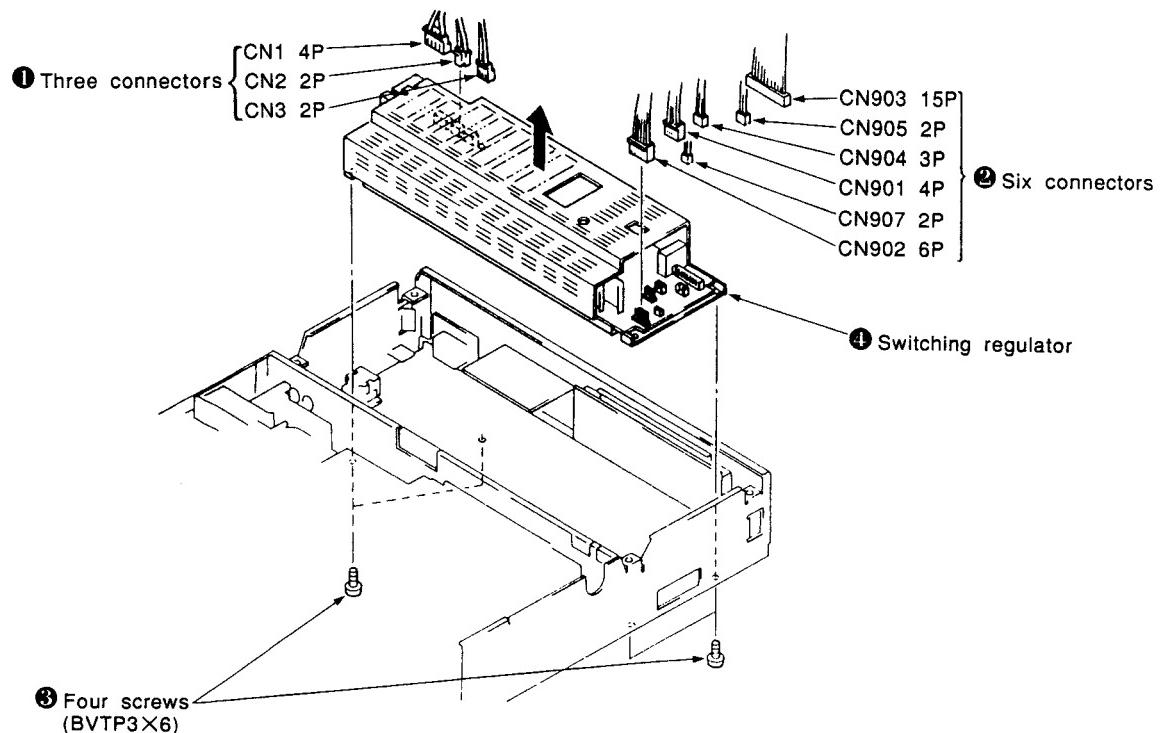
**2-5. REMOVAL OF MD (P201) ASSEMBLY (UP-1200A)
REMOVAL OF MD (P231) ASSEMBLY (UP-1200AEPM)**



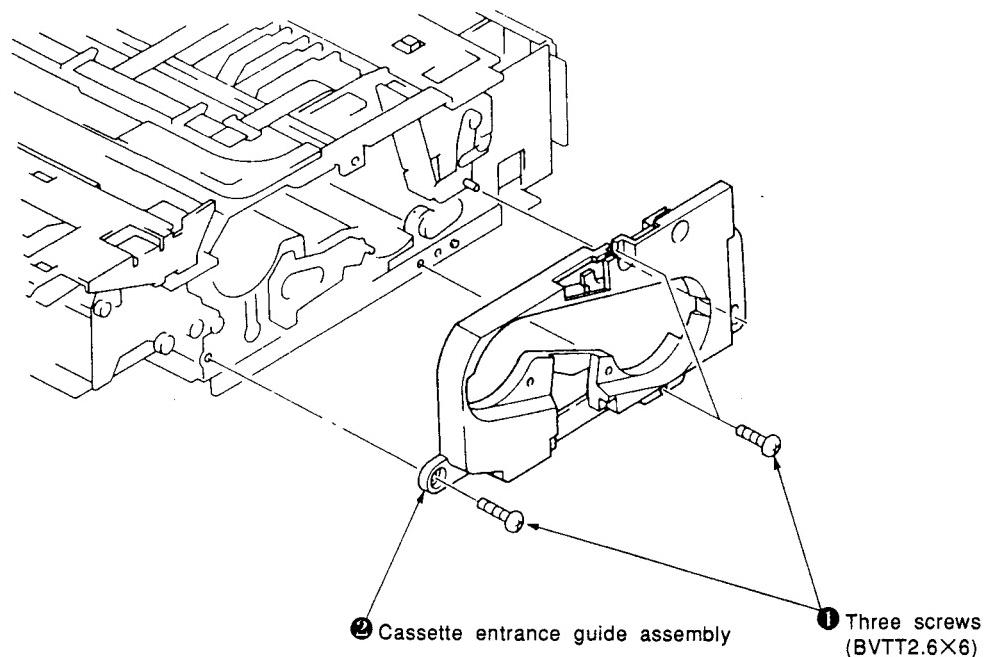
2-6. REMOVAL OF MAIN BOARD (FMY-13 BOARD, VA-76 BOARD) ASSEMBLY



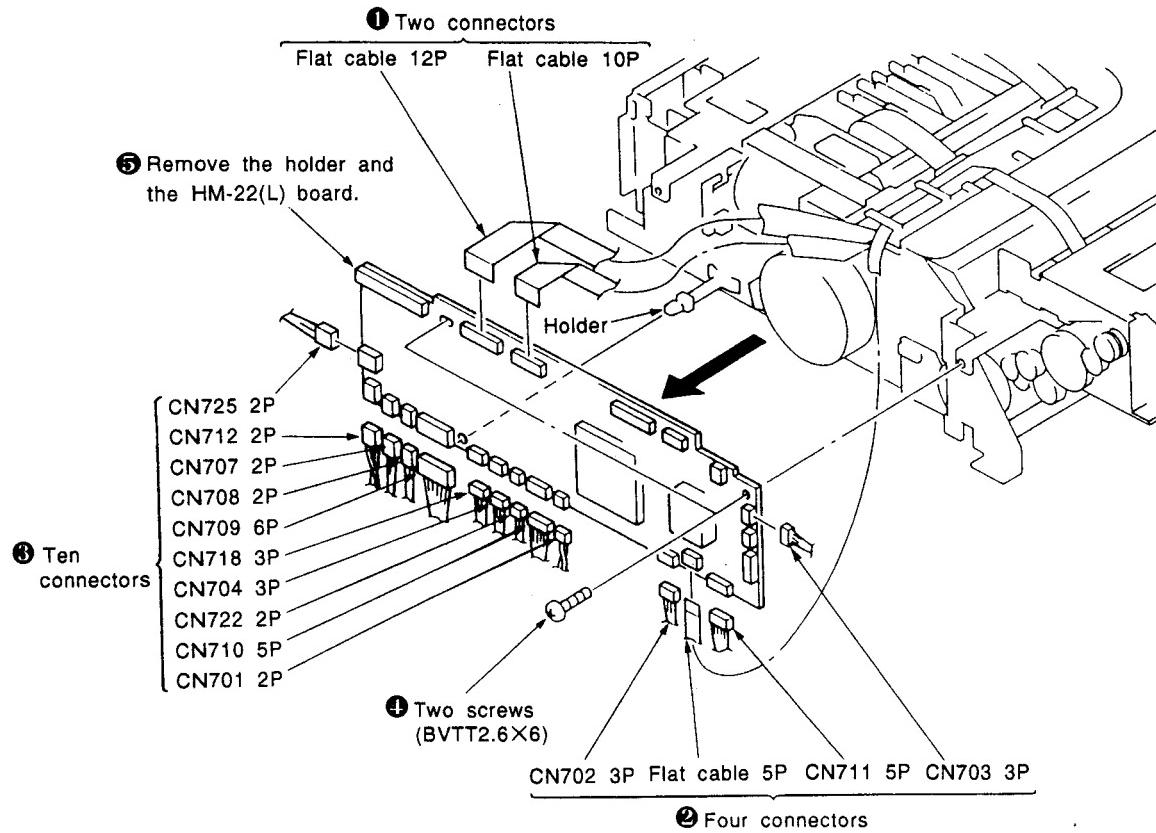
2-7. REMOVAL OF SWITCHING REGULATOR



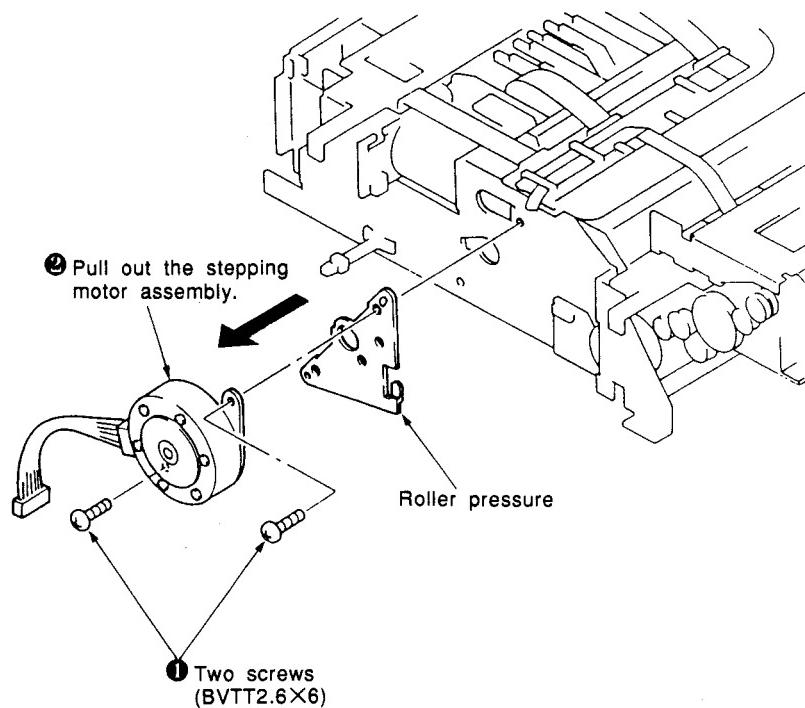
2-8. REMOVAL OF CASSETTE ENTRANCE GUIDE ASSEMBLY



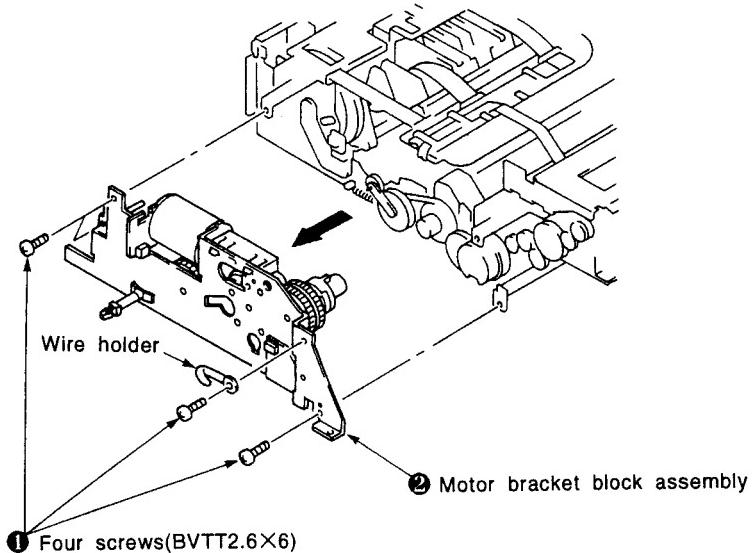
2-9. REMOVAL OF HM-22(L) BOARD



2-10. REMOVAL OF STEPPING MOTOR ASSEMBLY

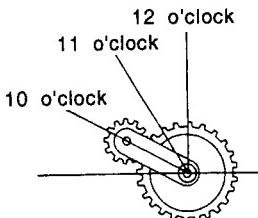


2-11. REMOVAL OF MOTOR BRACKET BLOCK ASSEMBLY

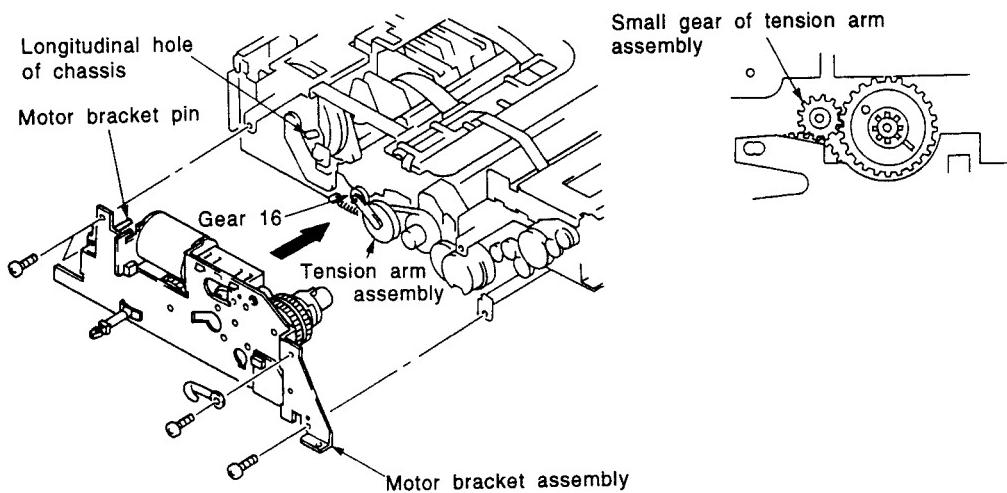


*Cautions during MD Assembling

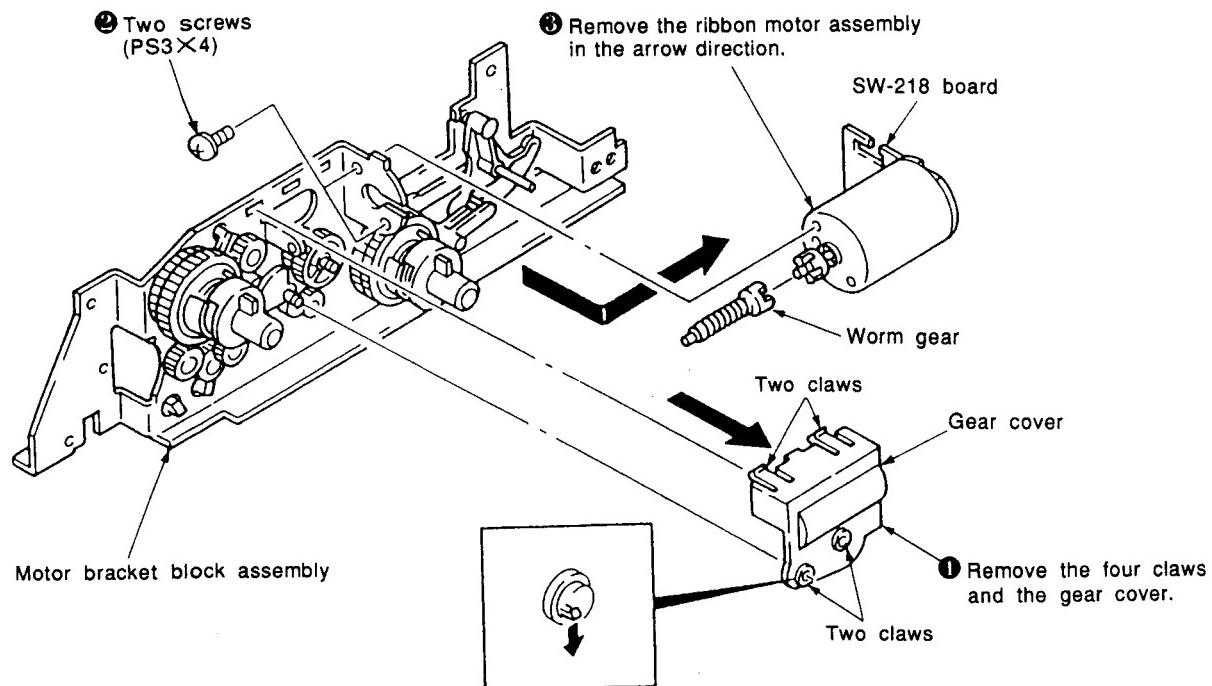
- Assembling of motor bracket assembly
- Confirm that the head is set to the H0 position.
(Refer to Fig. 1 in section 2-17.)
- Move the gear 16 arm of the tension arm assembly in the direction of 10 to 11 o'clock.



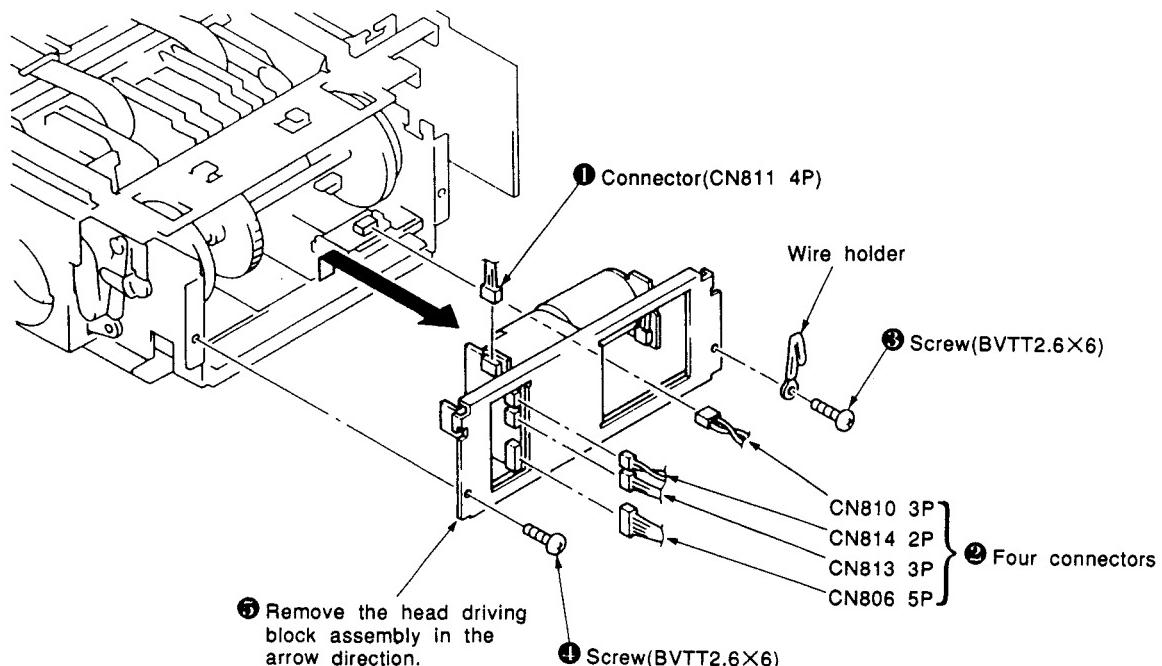
- Install the motor bracket assembly in the chassis.
- Confirm that the pin of the motor bracket is put on the left side of the chassis's longitudinal hole. (Refer to Fig. 3 in section 2-17.)
- View the inside of the chassis from the direction of the ribbon entrance and confirm that gear 16 is properly positioned beside the supply reel assembly.
(Take care that the reel wire of the microswitch on the SW-214 board is not caught.)



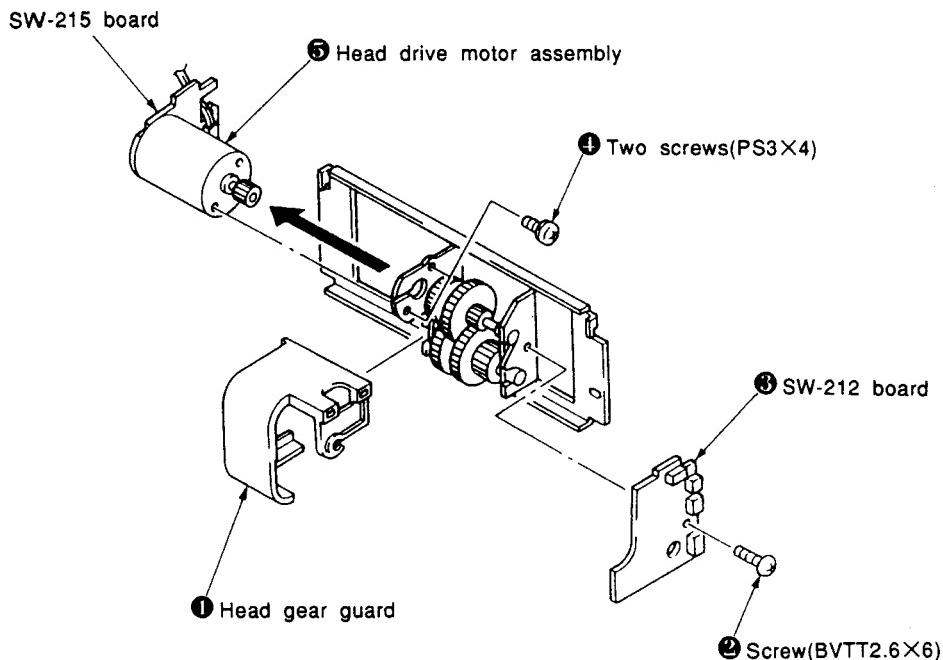
2-12. REMOVAL OF RIBBON MOTOR ASSEMBLY



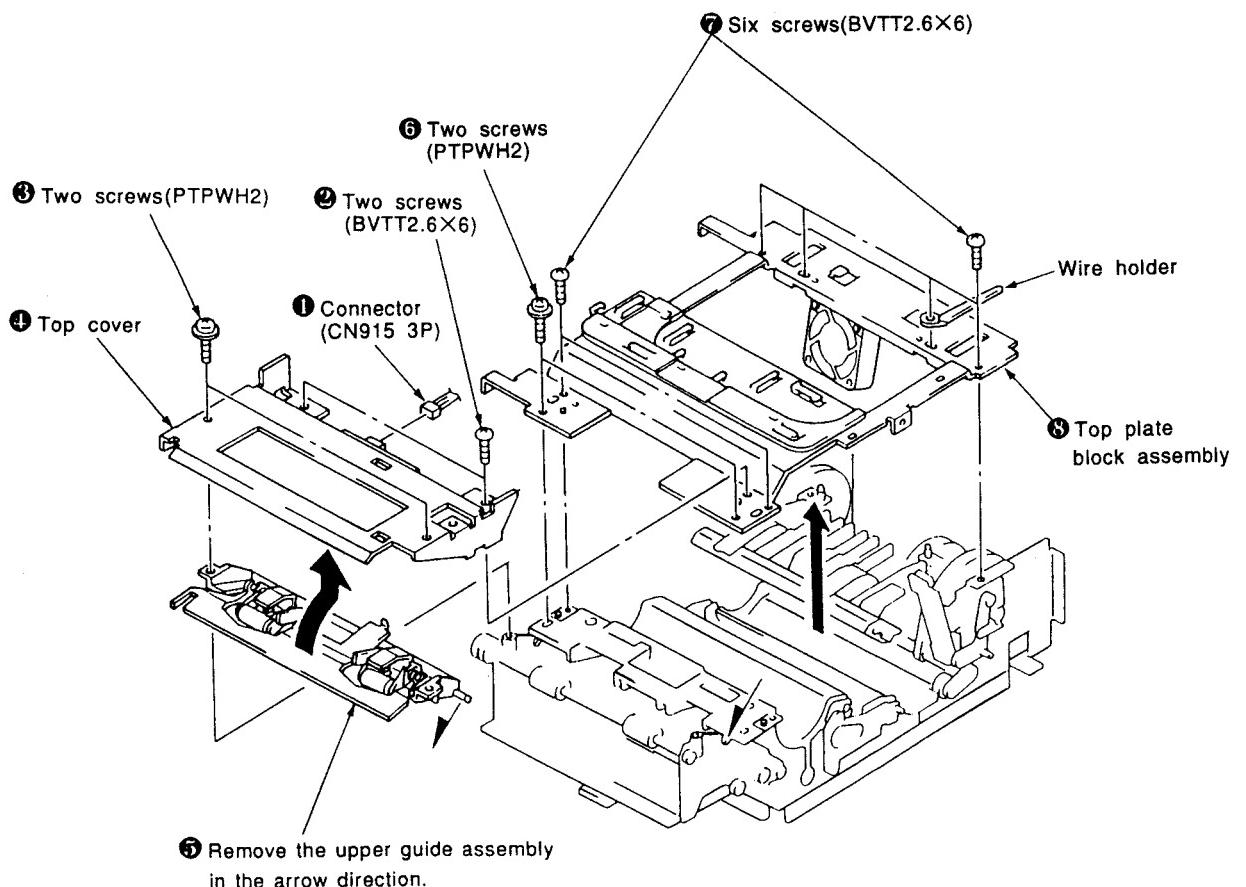
2-13. REMOVAL OF HEAD DRIVING BLOCK ASSEMBLY



2-14. REMOVAL OF HEAD DRIVE MOTOR ASSEMBLY

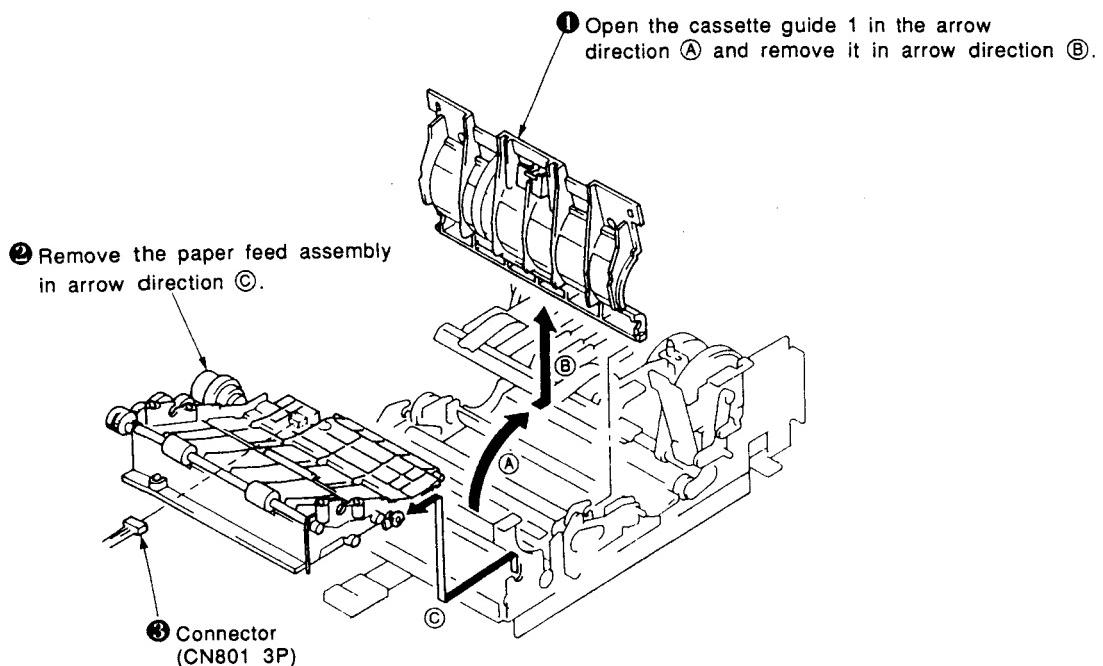


2-15. REMOVAL OF UPPER GUIDE ASSEMBLY AND TOP PLATE BLOCK ASSEMBLY



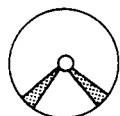
⑤ Remove the upper guide assembly
in the arrow direction.

2-16. REMOVAL OF CASSETTE GUIDE 1 AND PAPER FEED ASSEMBLY



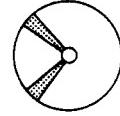
*Cautions during MD Assembling

- Move the roller to the P2 position. (Refer to the illustrated gear.)
Rotate the reflection plate of the gear manually so that it is put in the position shown below.



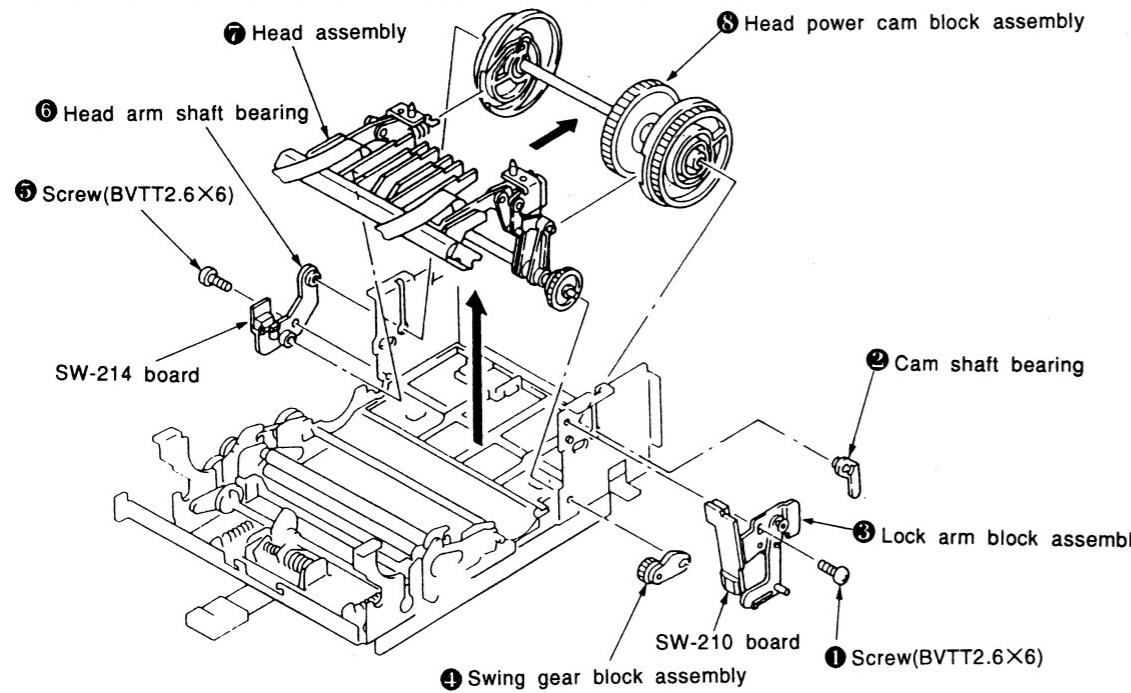
(Set the gear position to P2.)

- Install the paper feed assembly in the chassis. (Refer to section 2-16.)
- Handle the lead wire of the sensor with care and fix it to the hook of the paper feed tray guide.
- Move the roller to the P0 position. (Refer to the illustrated gear.)
Rotate the reflection plate of the gear manually so that it is put in the position shown below.

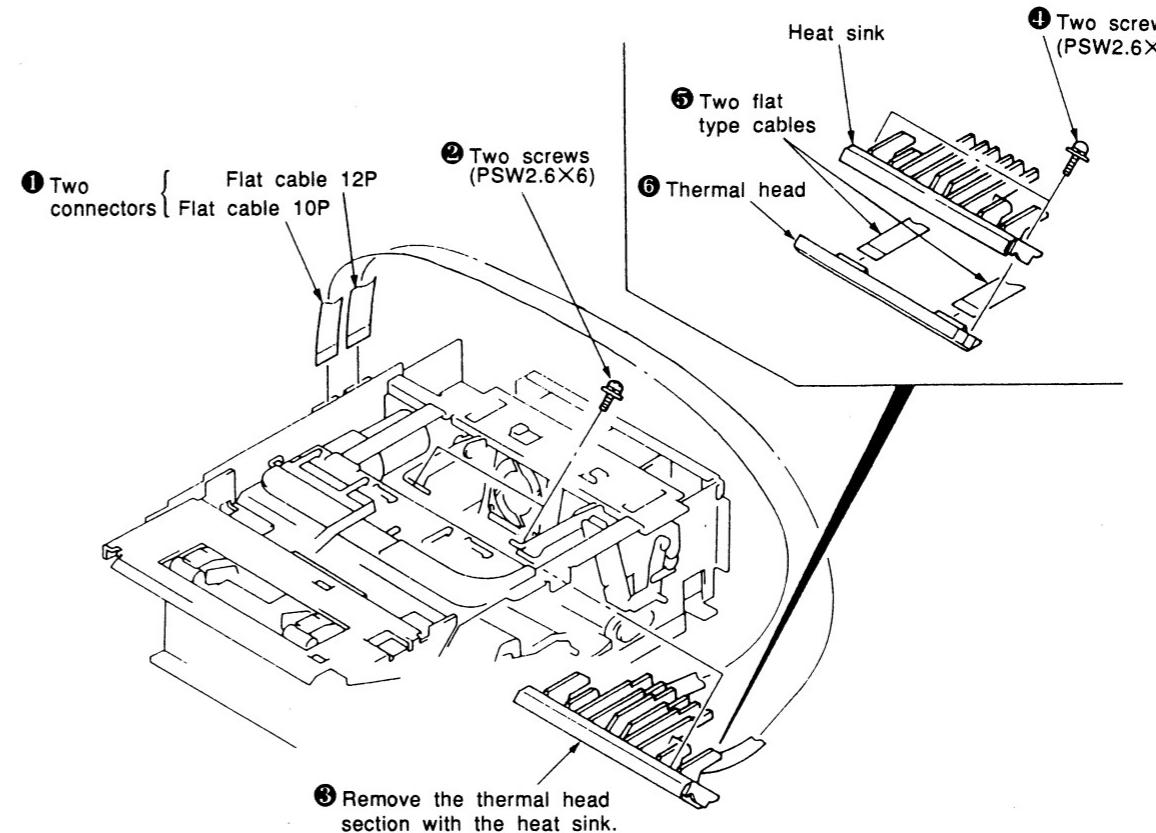


(Set the gear position to P0.)

2-17. REMOVAL OF HEAD ASSEMBLY AND HEAD POWER CAM BLOCK ASSEMBLY

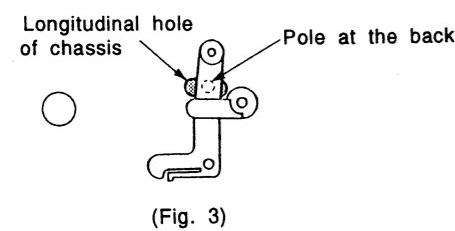
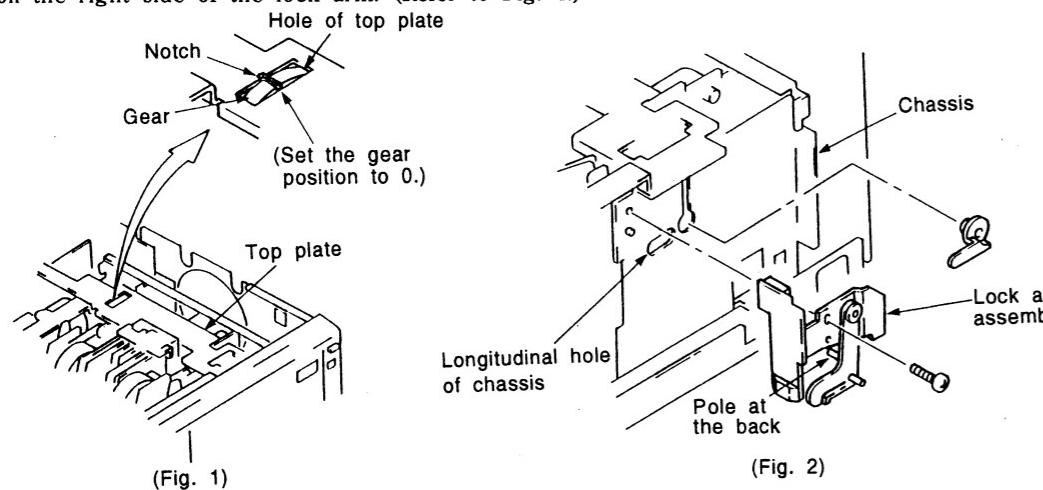


2-18. REMOVAL OF THERMAL HEAD



*Cautions during MD Assembling

- Confirm that the head is set to the H0 position. (Refer to Fig. 1.)
- If the head is not in the H0 position, remove the head drive assembly once, rotate the gear in the direction of the H0 position, and install the head drive assembly again.
- Insert the pole at the back of the lock arm into the groove of the head cam, then install.
If the lock arm is installed properly, the longitudinal hole of the chassis is viewed on the left side of the lock arm. (Refer to Fig. 3.)
If it is installed improperly, the longitudinal hole of the chassis is viewed on the right side of the lock arm. (Refer to Fig. 4.)



— 53 —

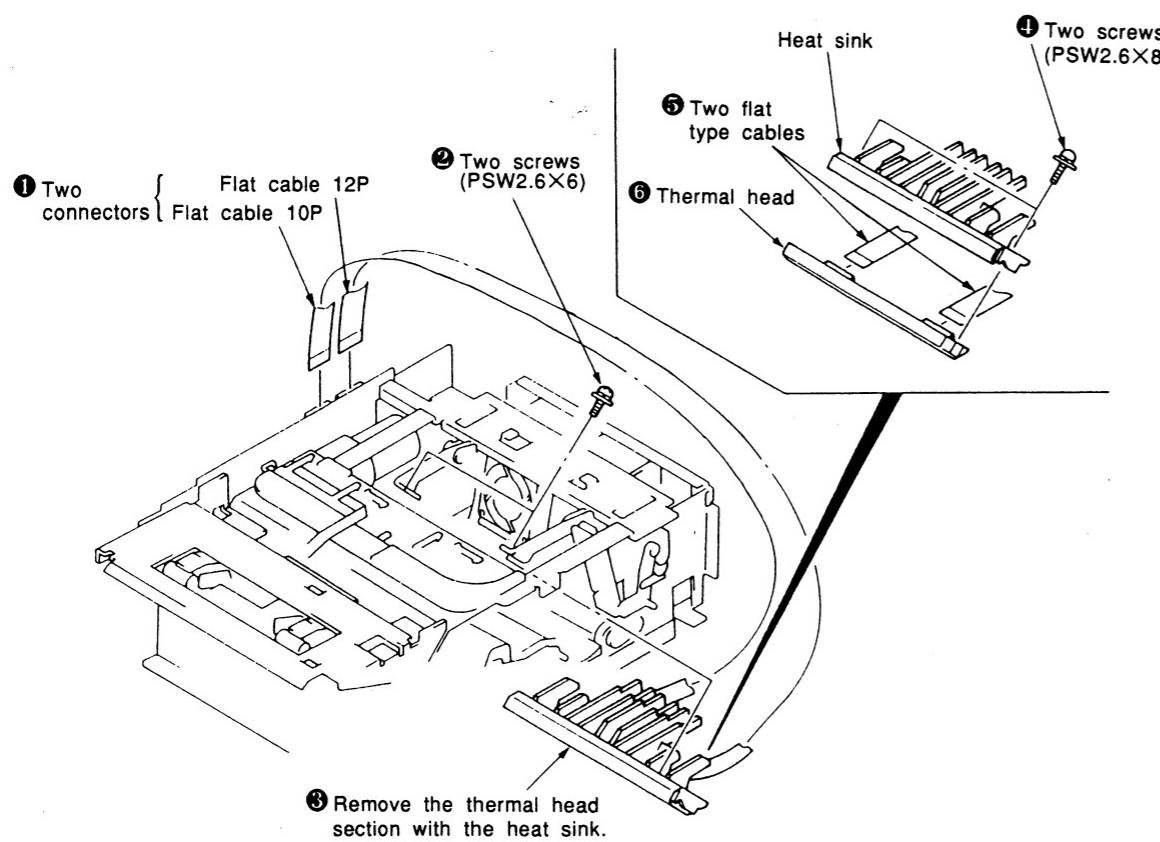
The longitudinal hole is viewed on the right side of the lock arm.



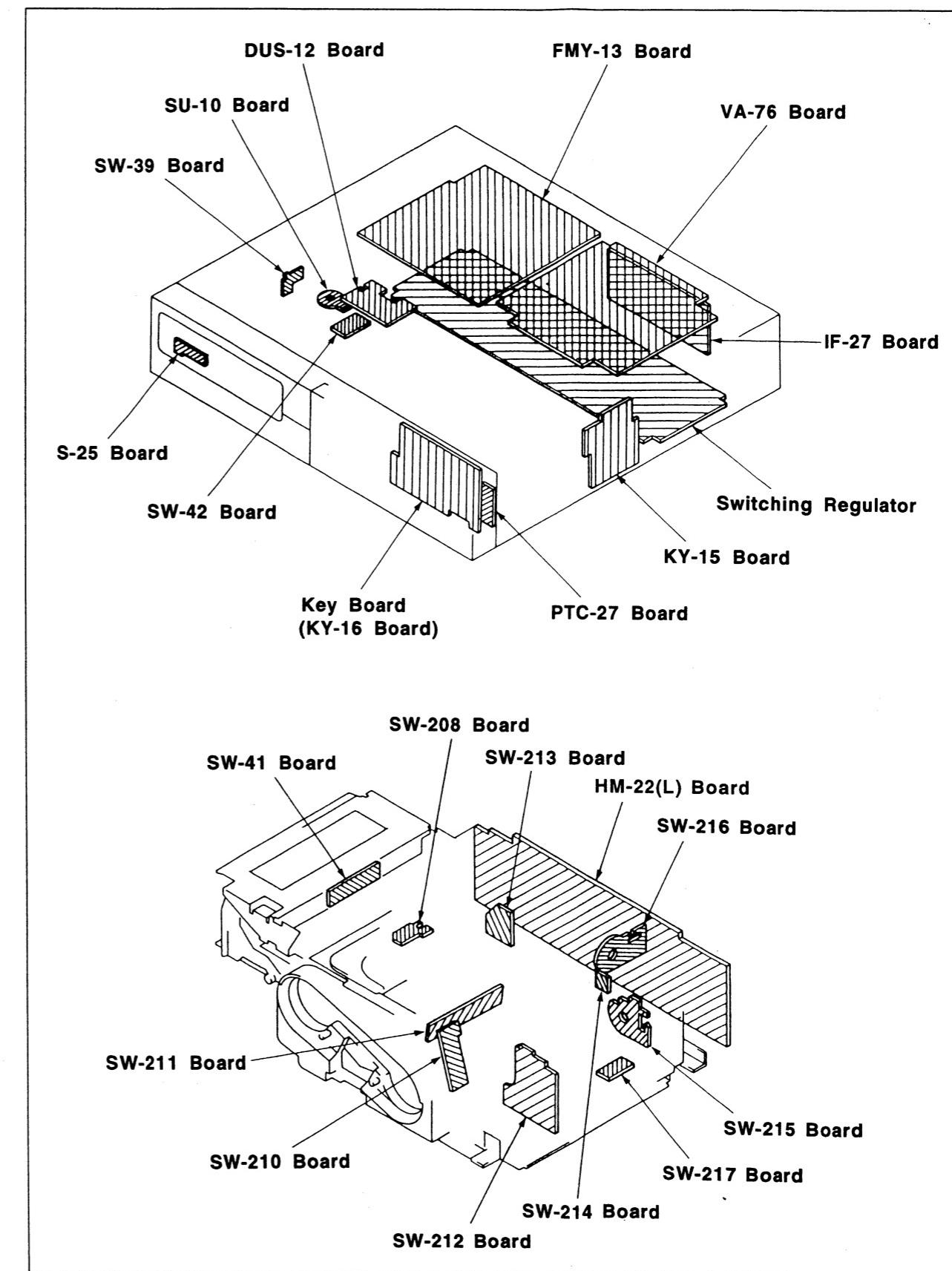
(Fig. 4)

SECTION 3 DIAGRAMS

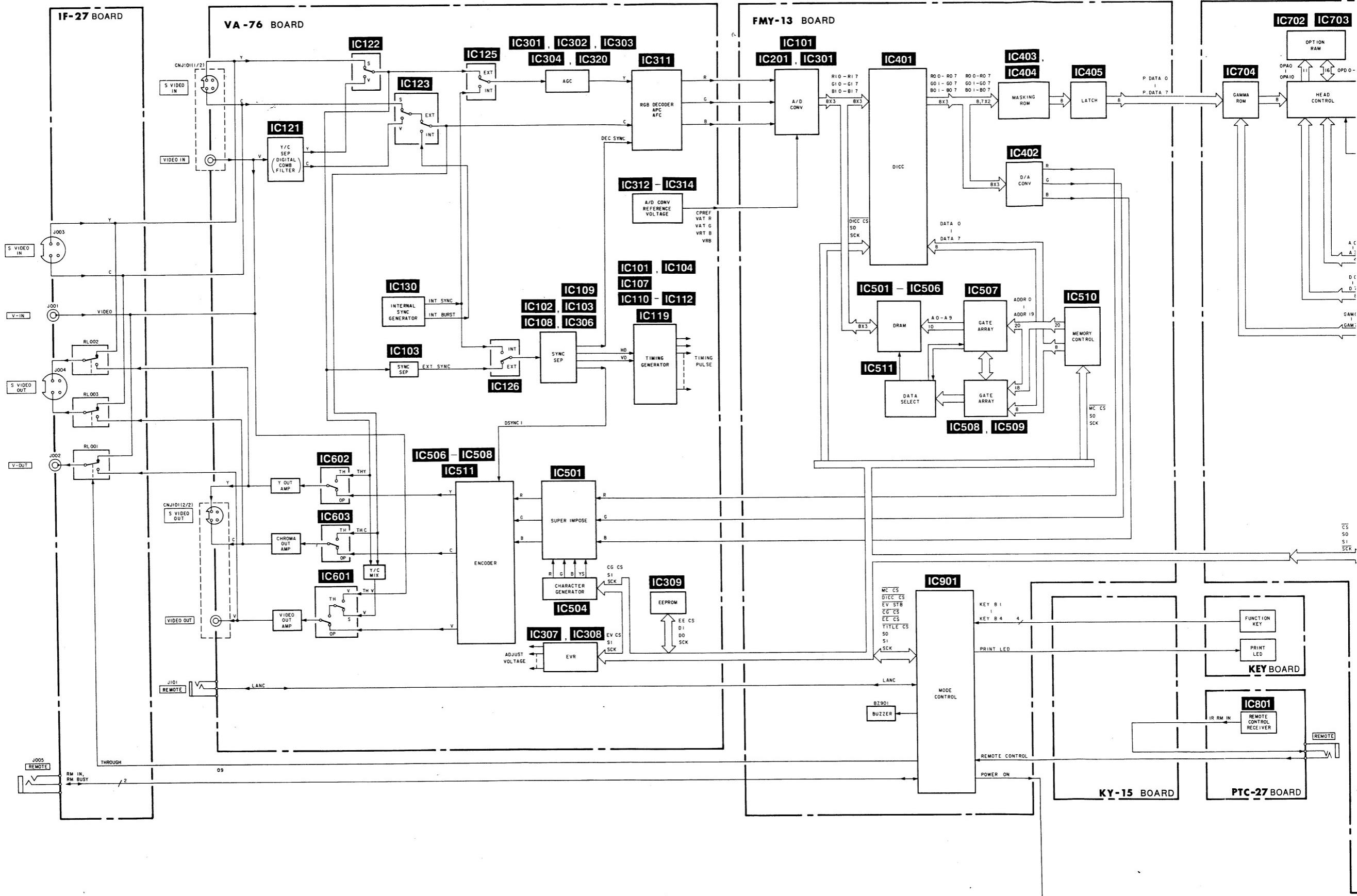
2-18. REMOVAL OF THERMAL HEAD

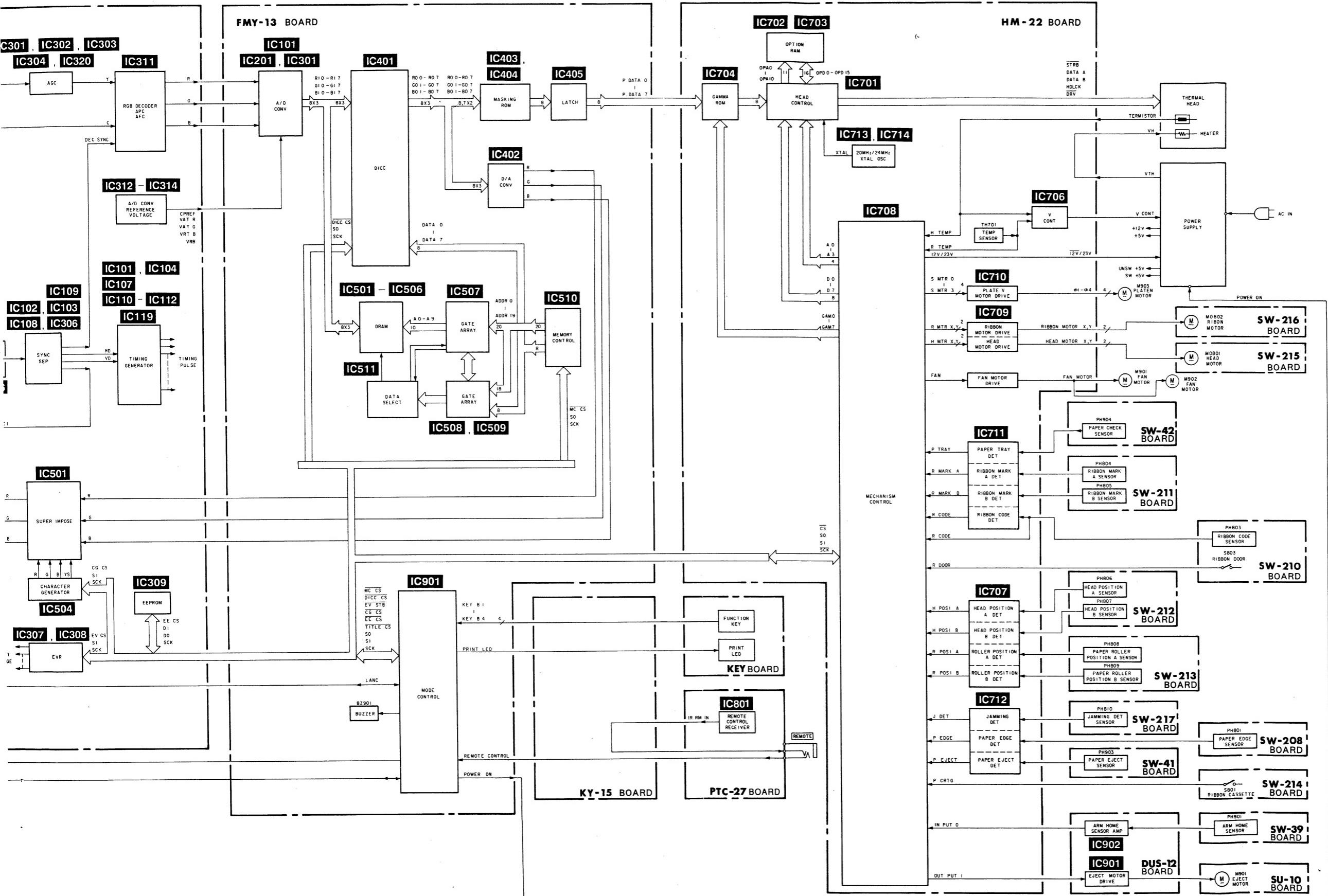


3-1. CIRCUIT BOARDS LOCATION

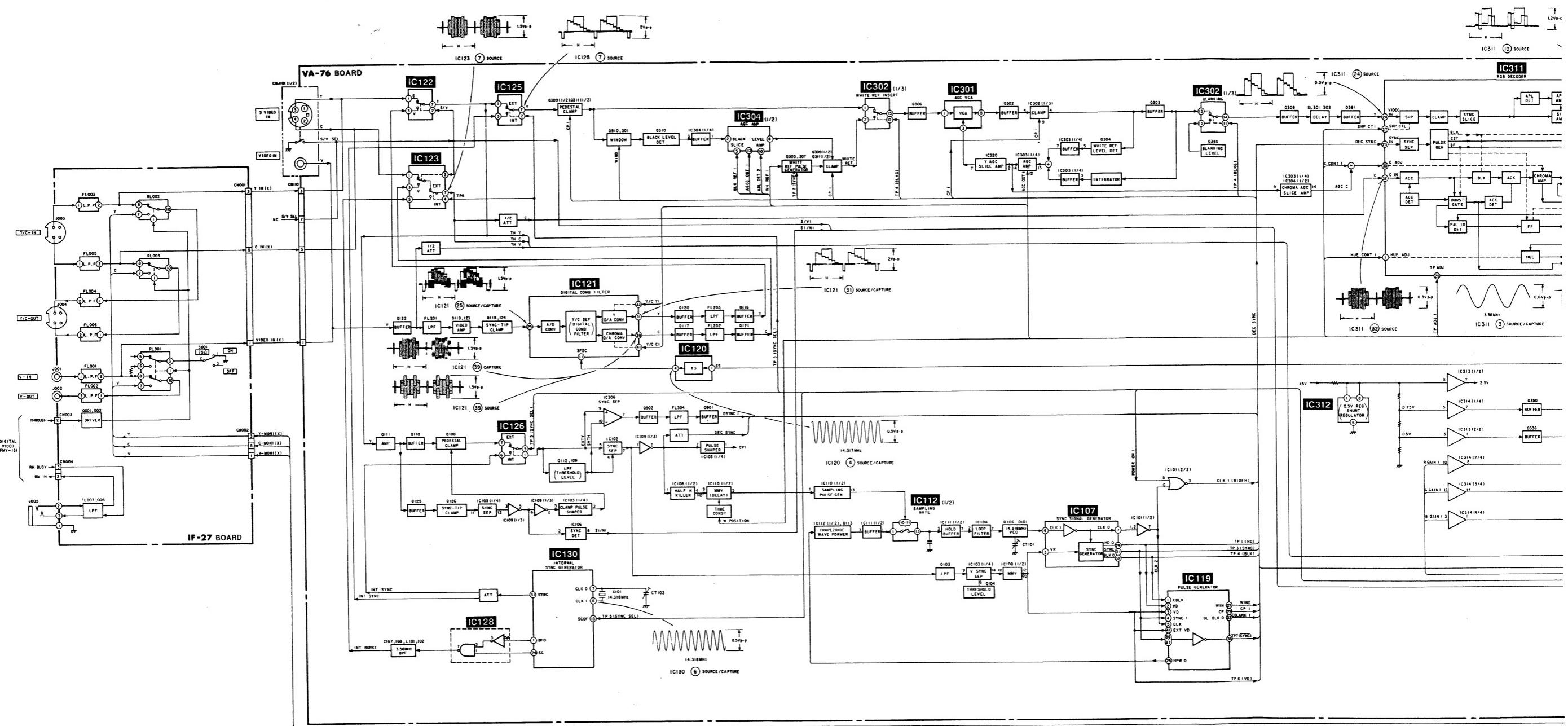


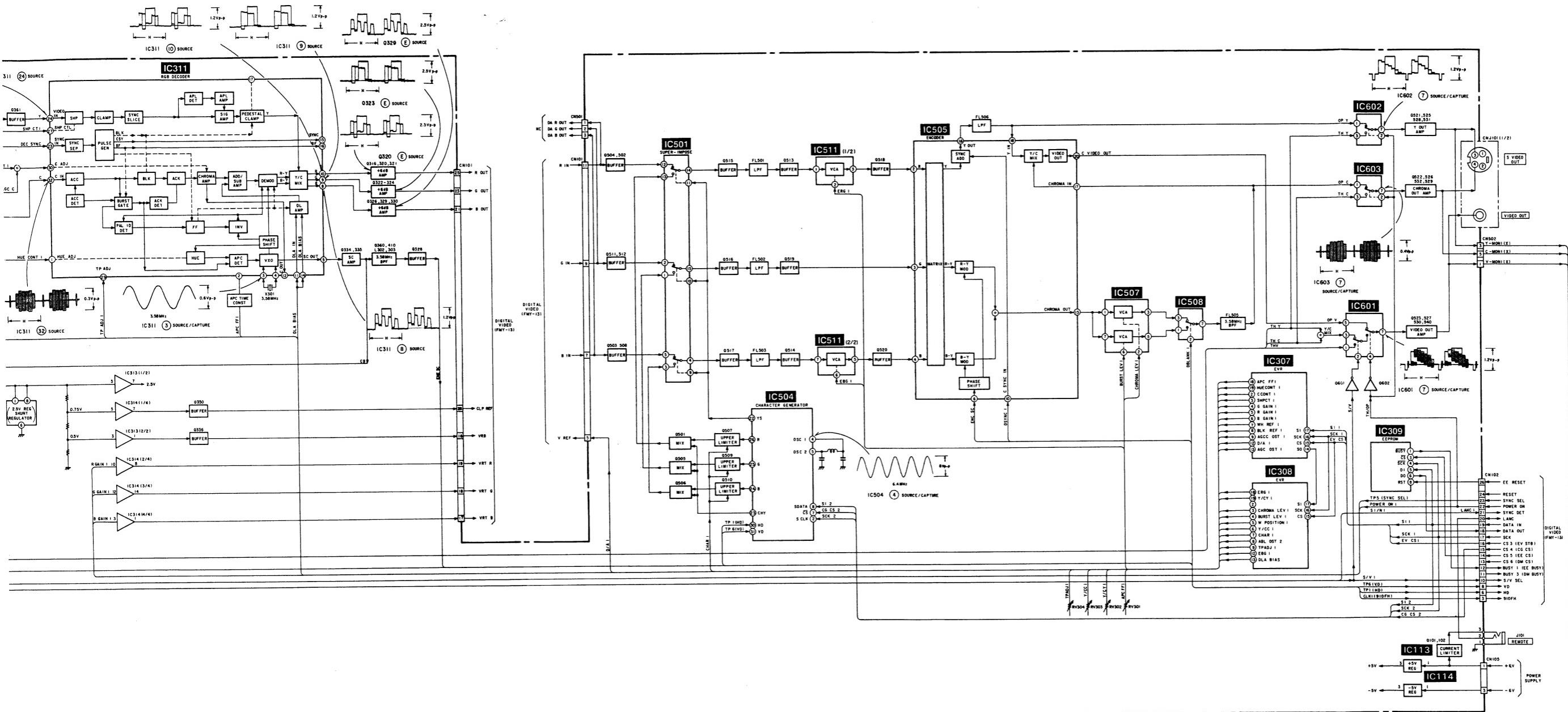
3-2. OVERALL BLOCK DIAGRAM



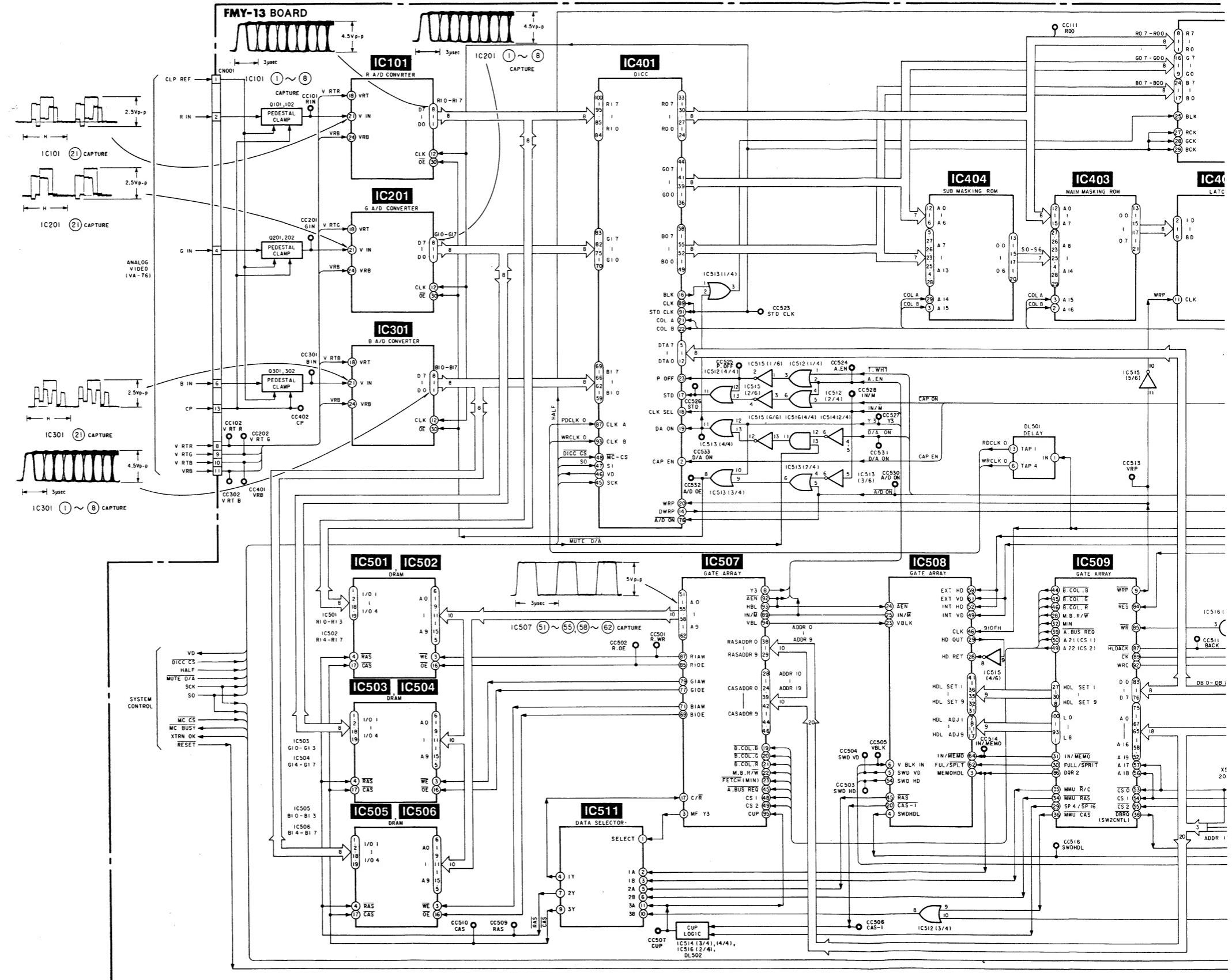


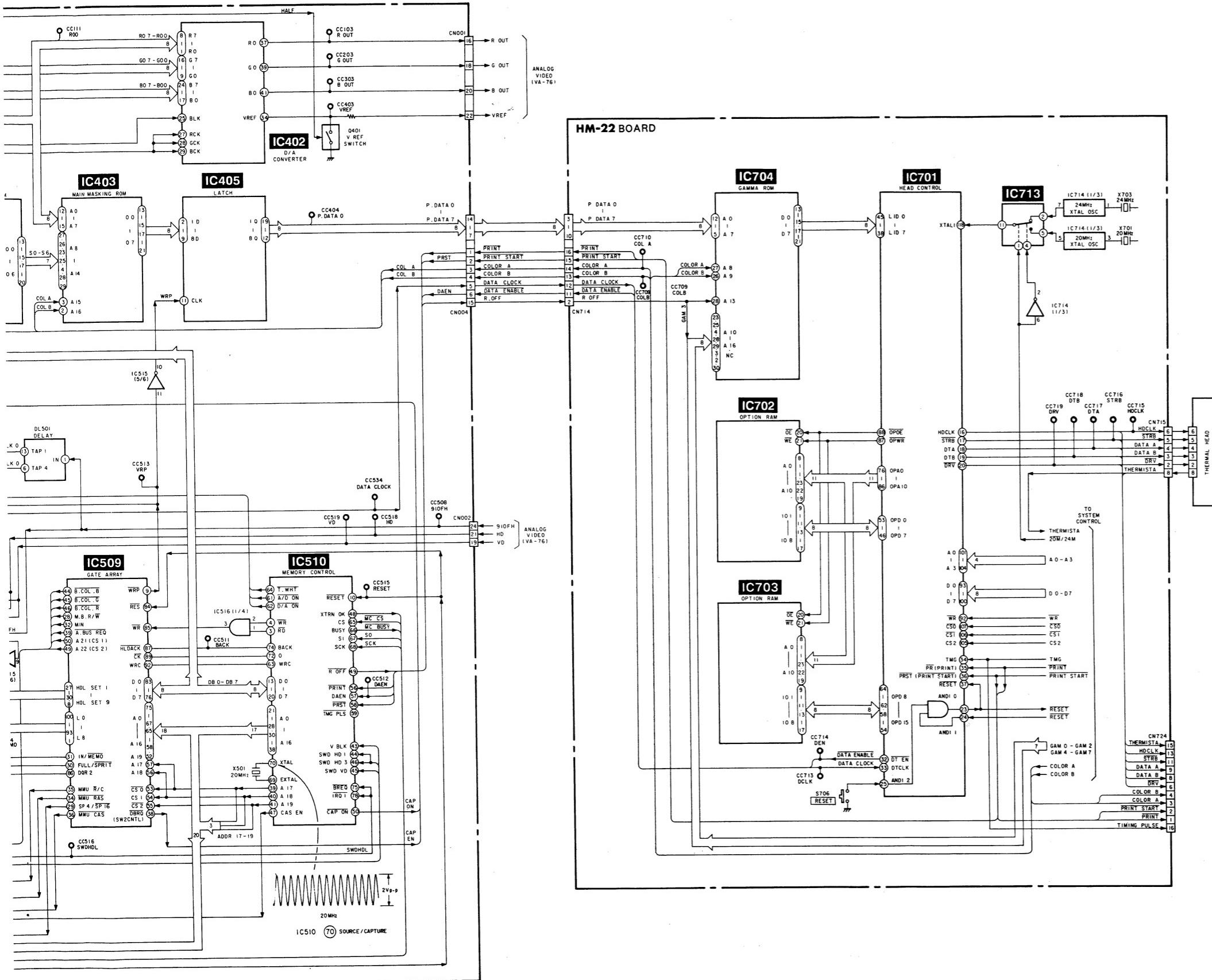
3-3. ANALOG BLOCK DIAGRAM



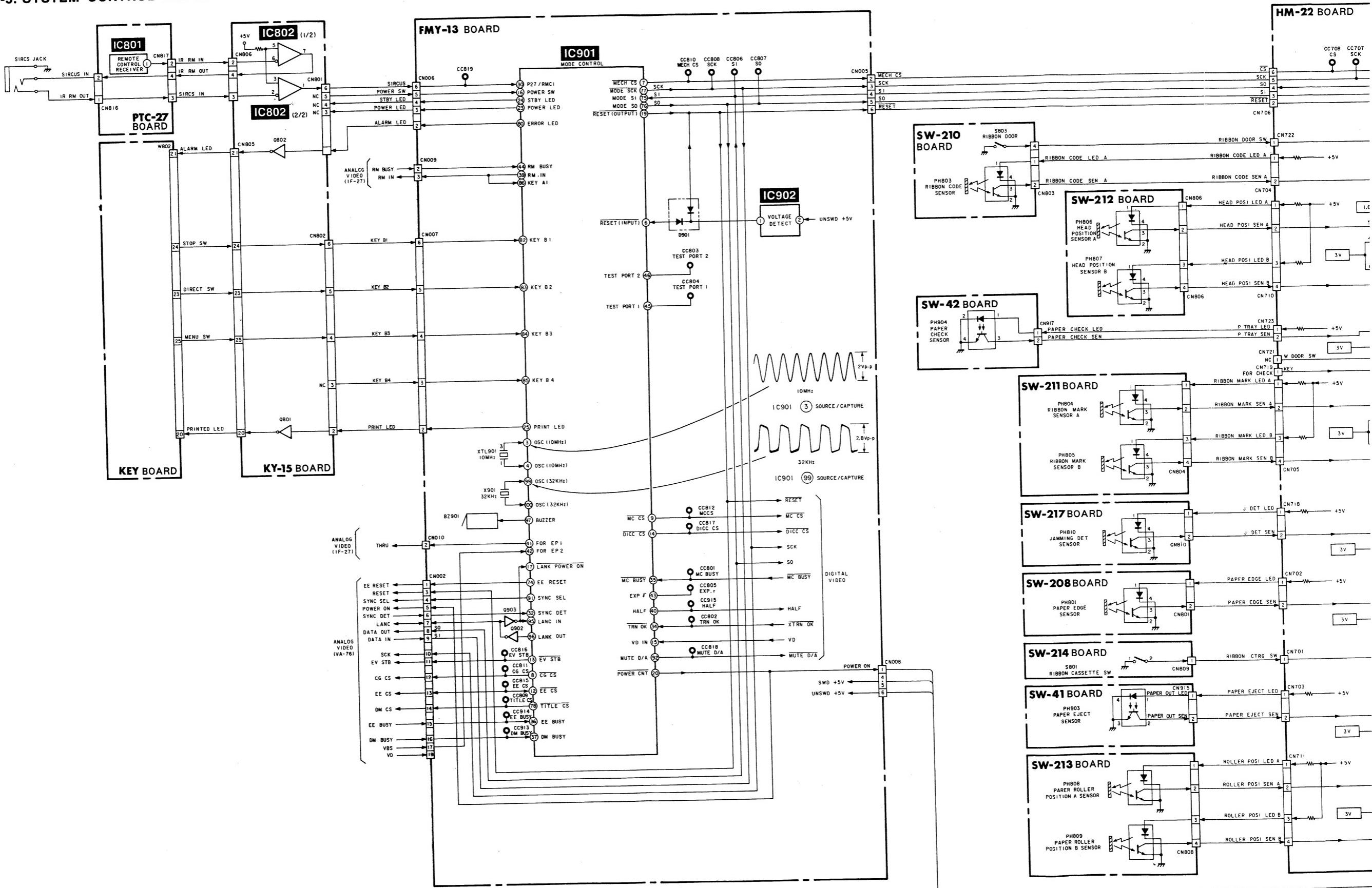


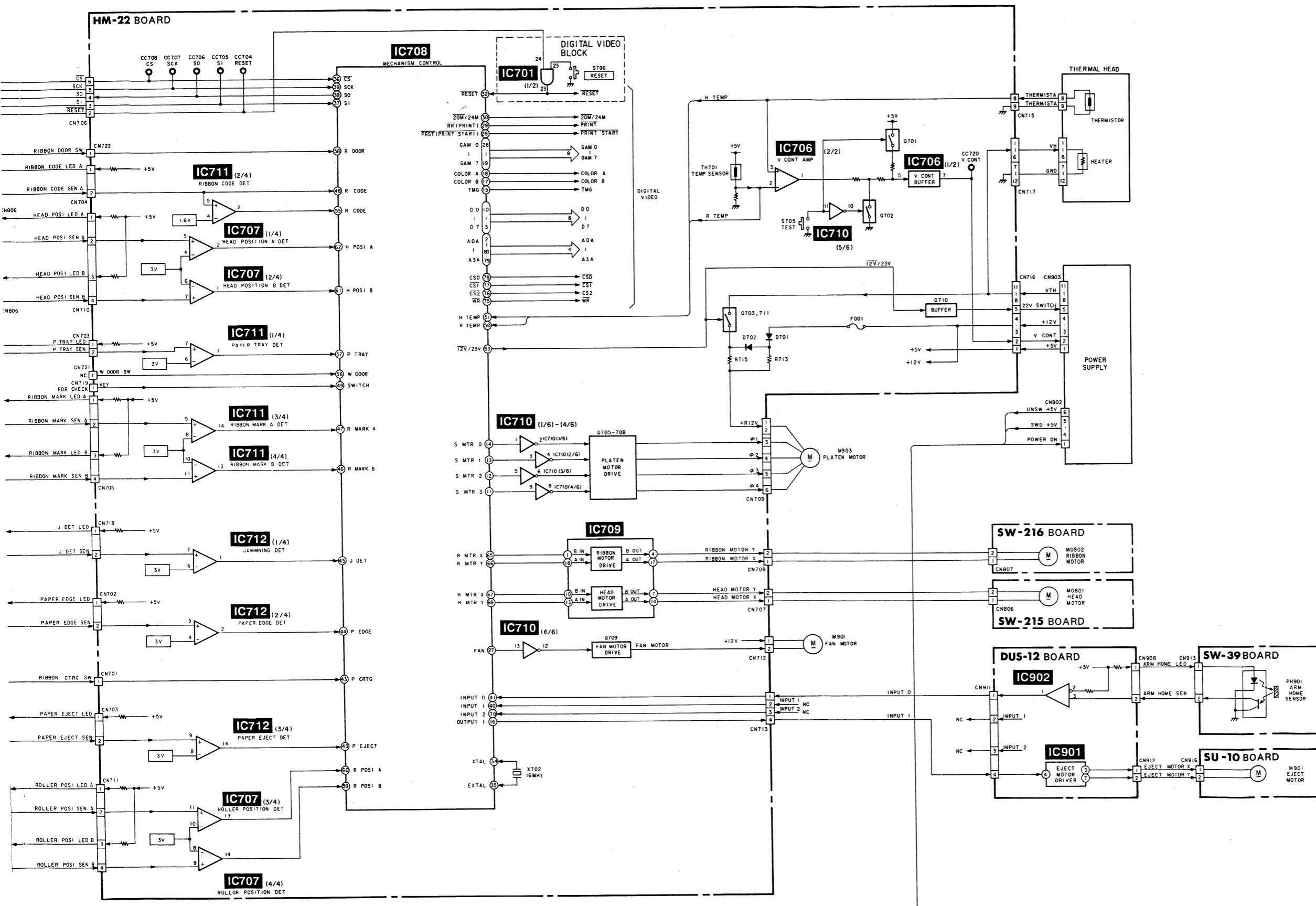
3-4. DIGITAL BLOCK DIAGRAM



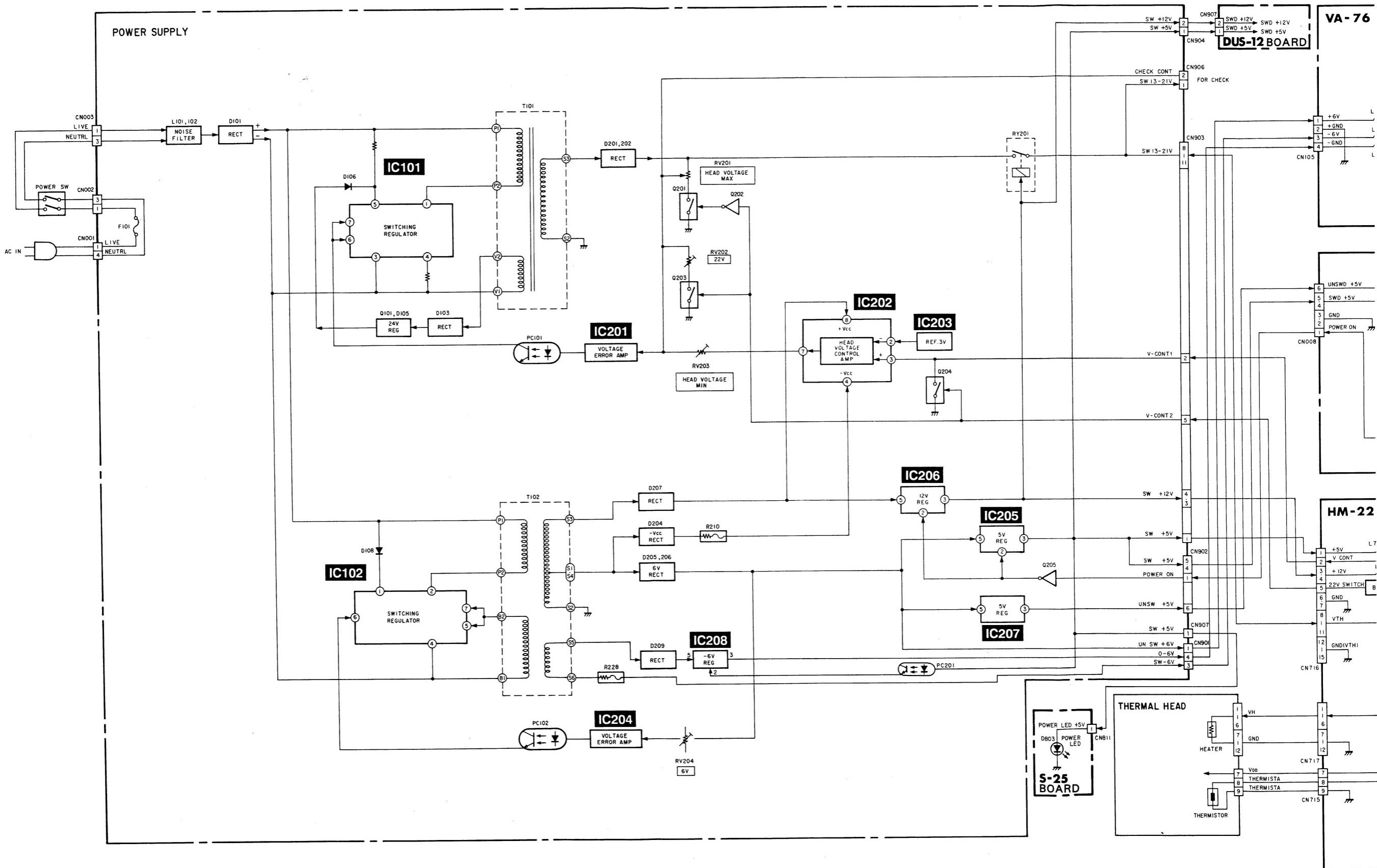


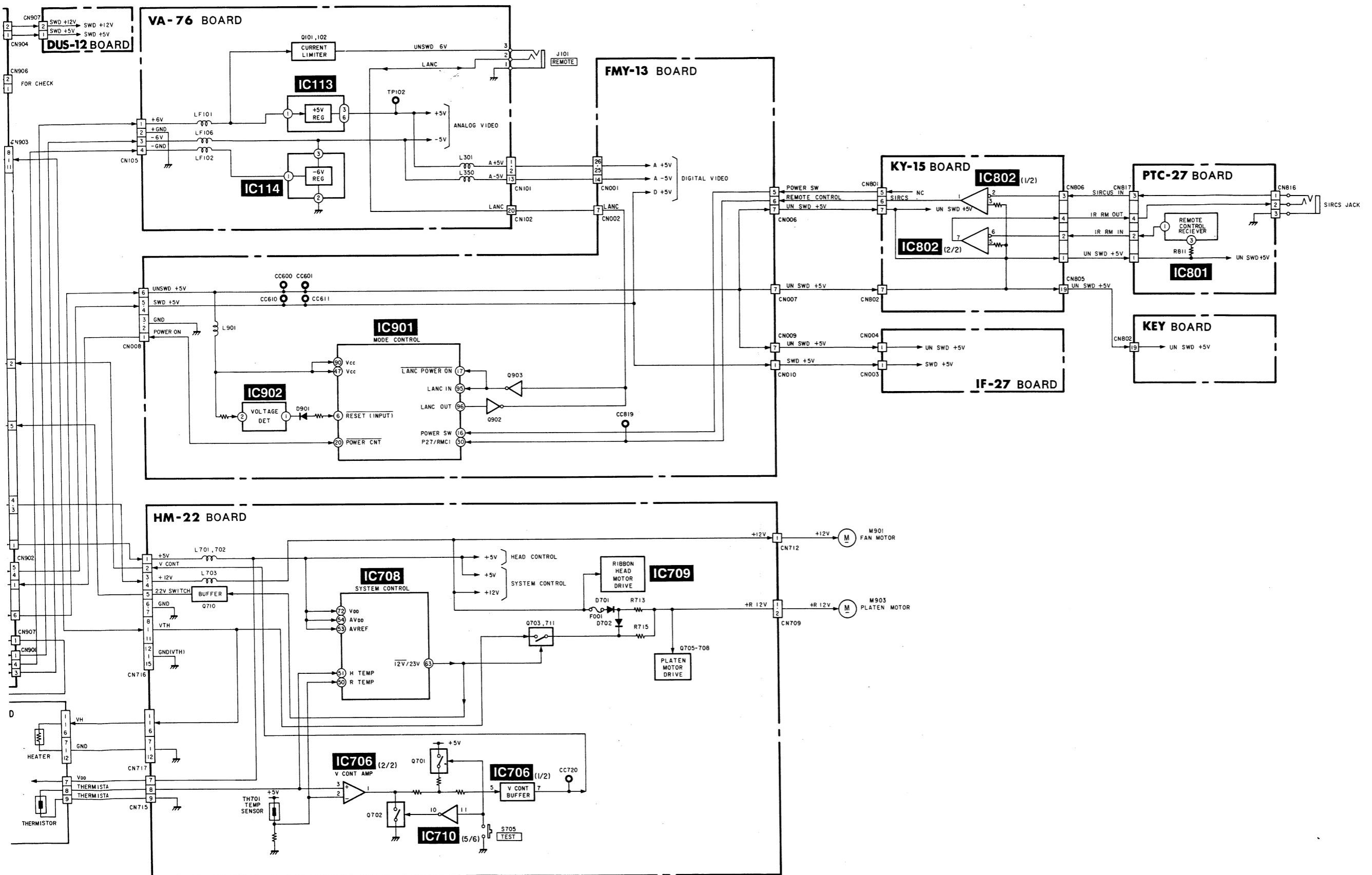
3-5. SYSTEM CONTROL BLOCK DIAGRAM





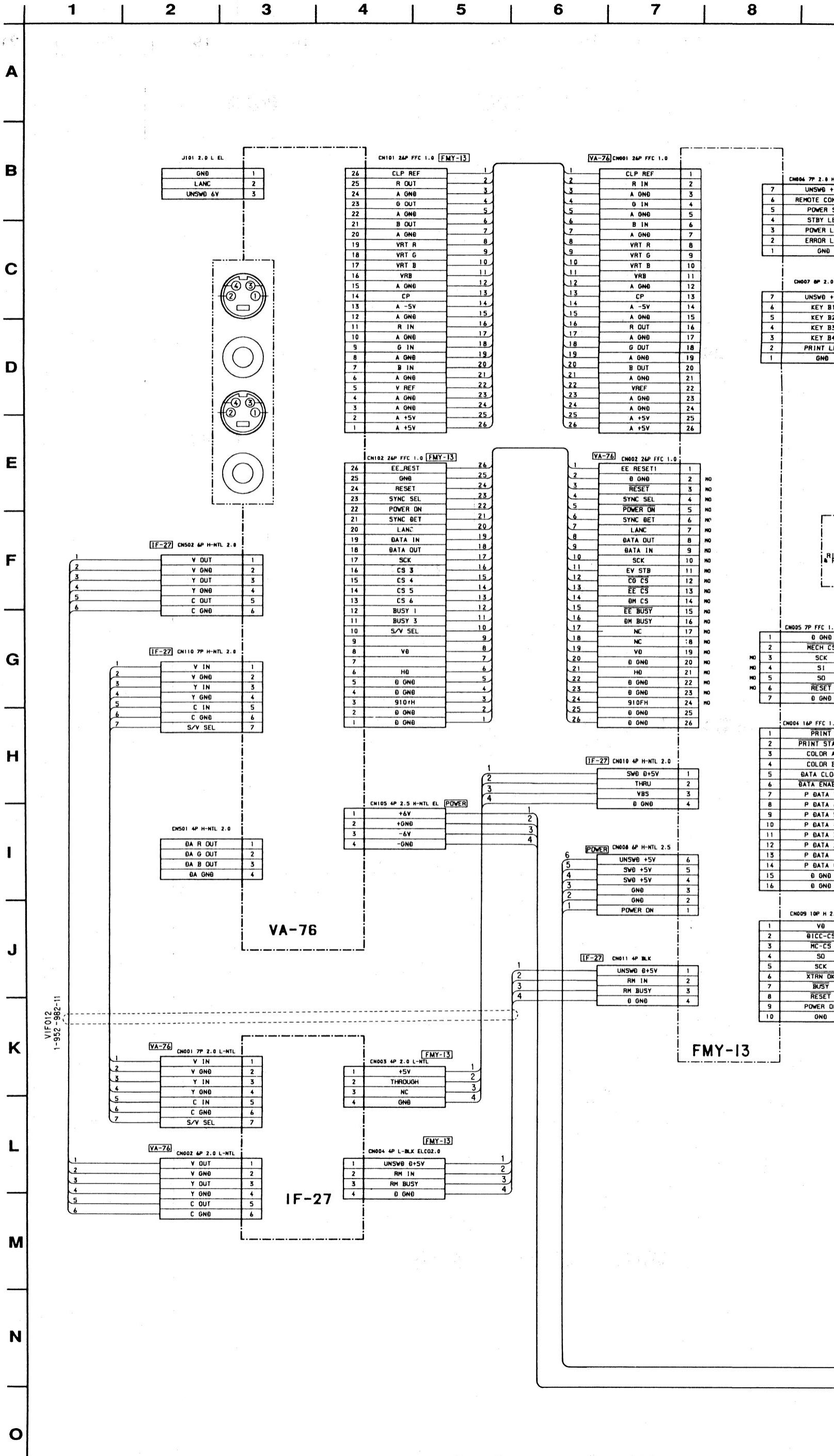
3-6. POWER SUPPLY BLOCK DIAGRAM

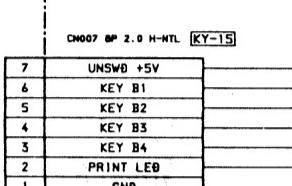
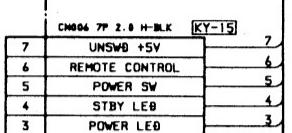
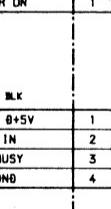
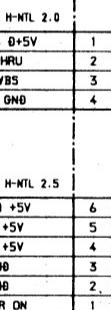
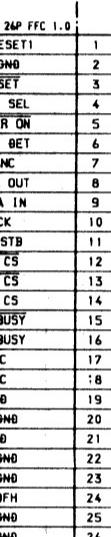
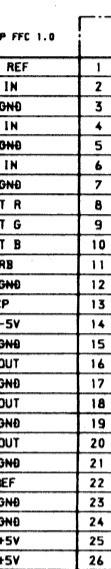




SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM

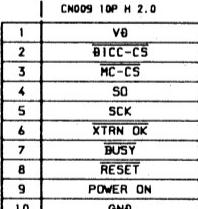
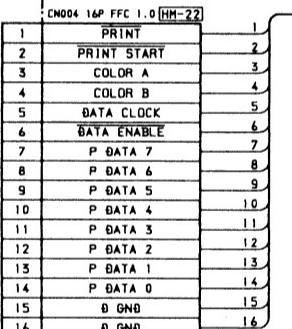
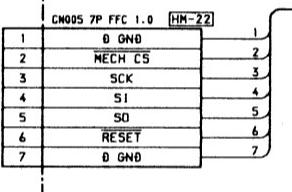
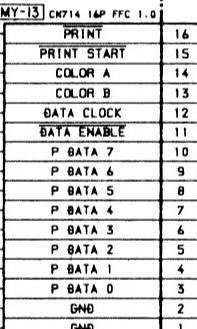
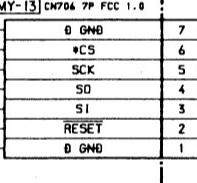
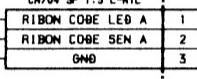
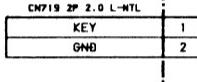
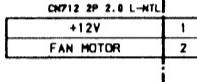
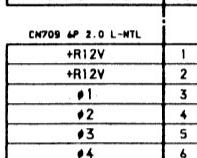
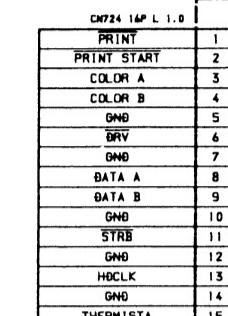
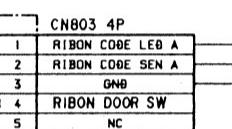




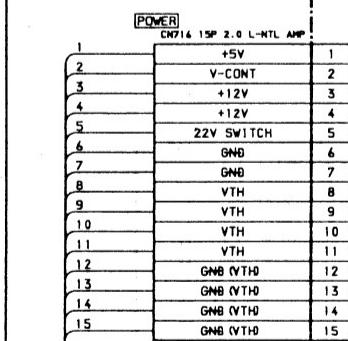
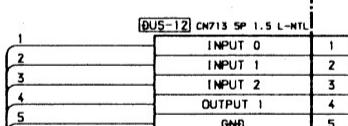
SW-210

RIBBON CODE SENSOR

+ RIBBON DOOR SW



FMY-13



HM-22

FMY KY-152-986-11

1-952-986-11

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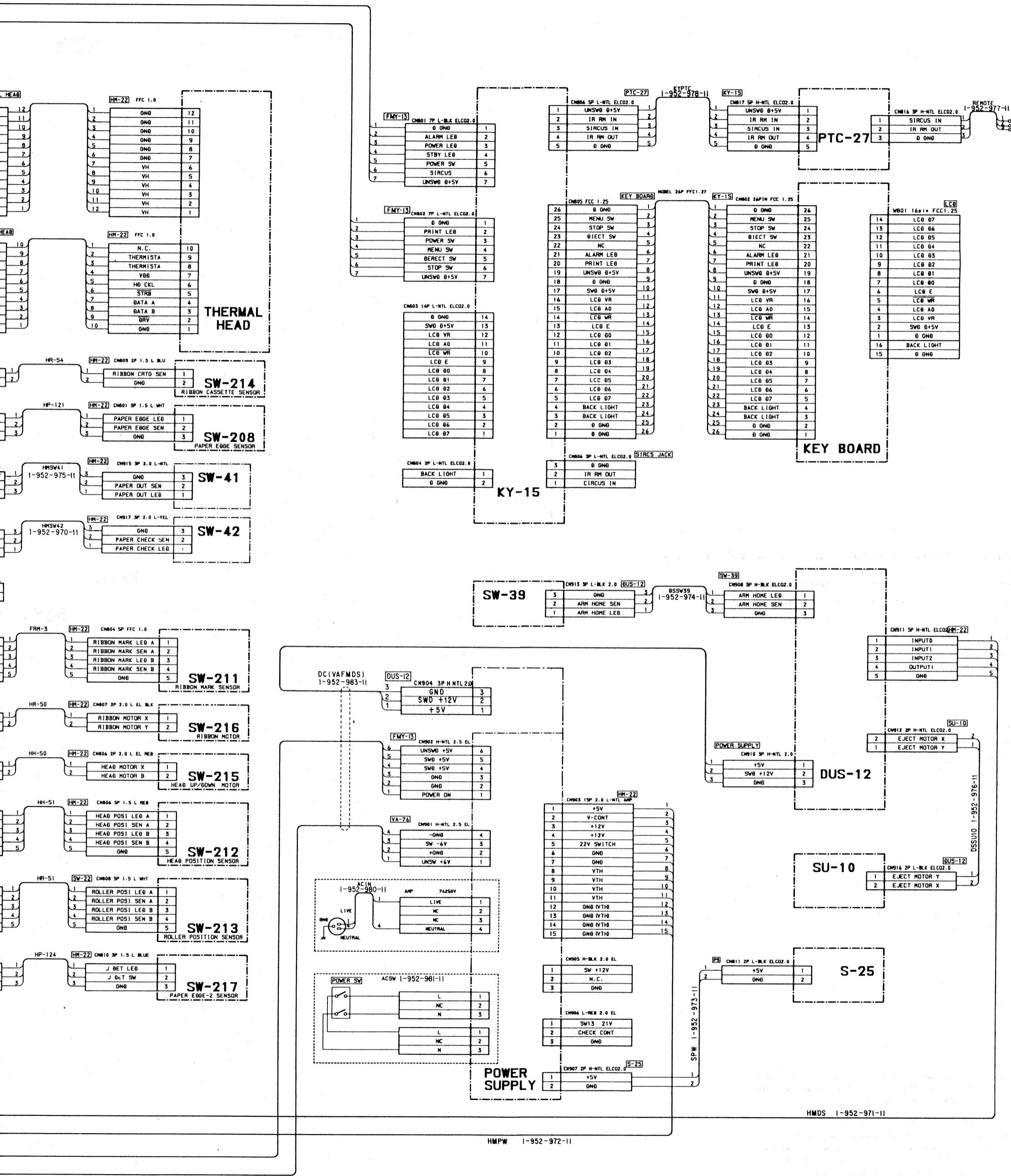
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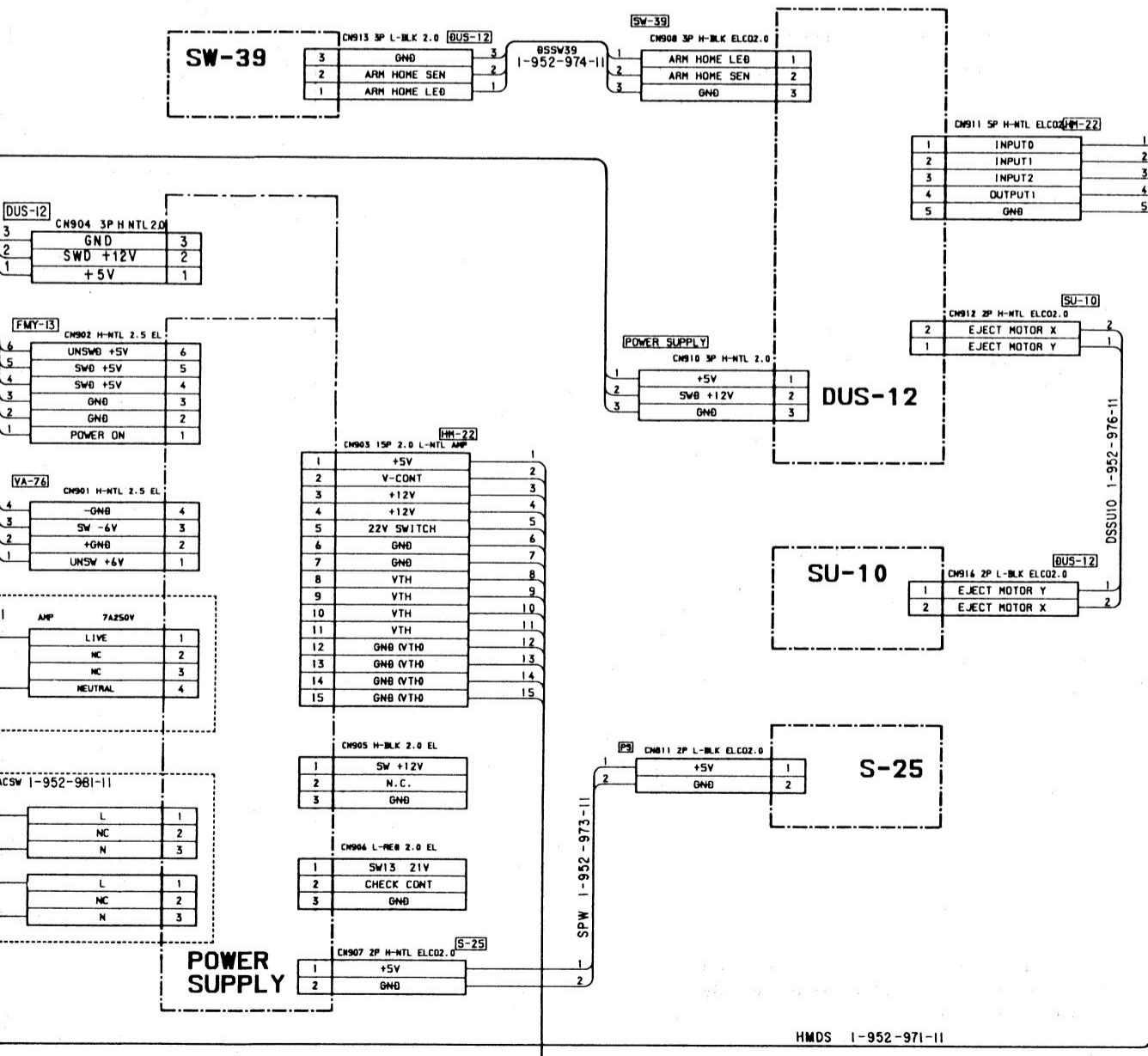
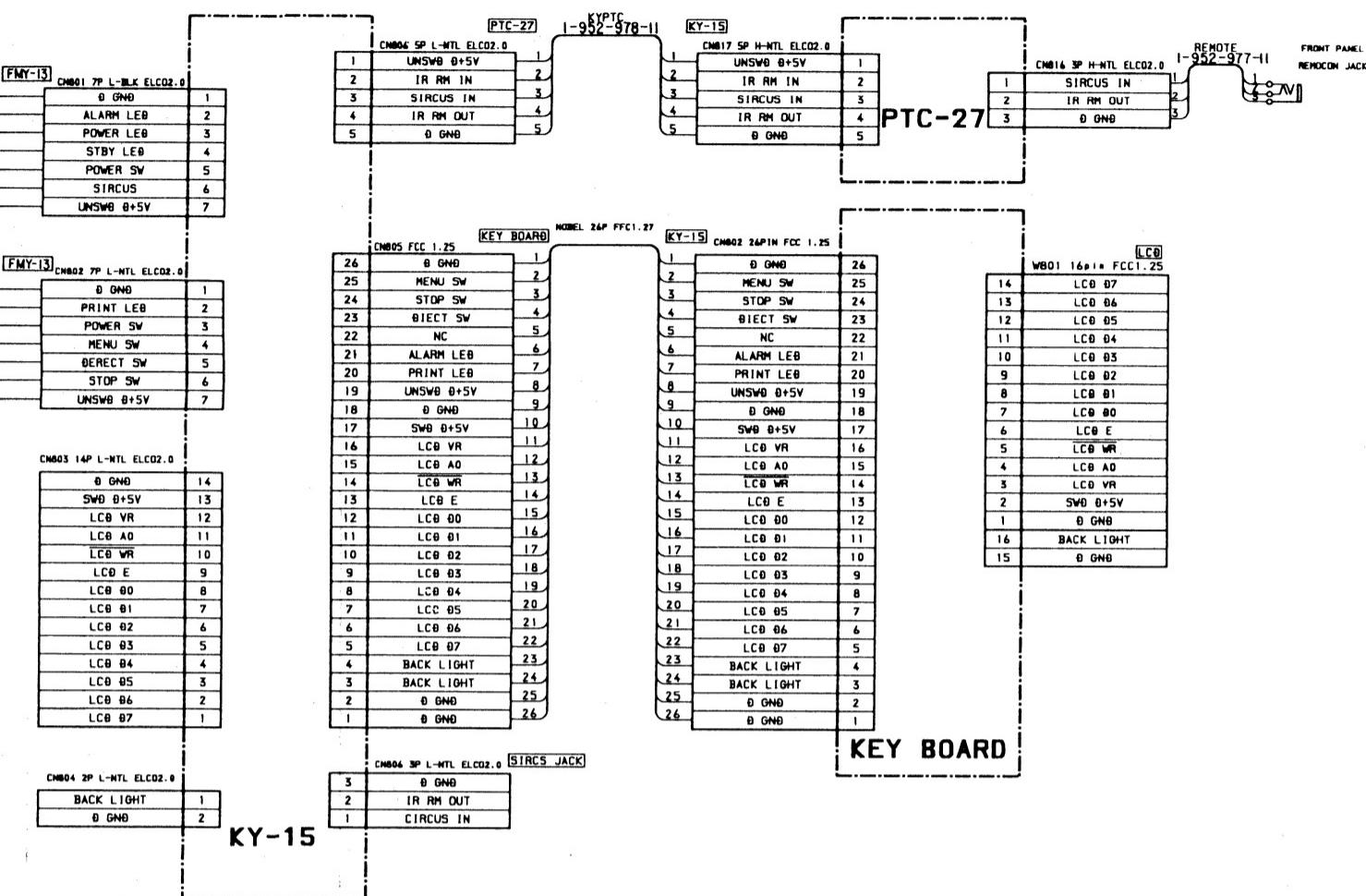
1-952-986-11

1-952-986-11

1-952-986-11

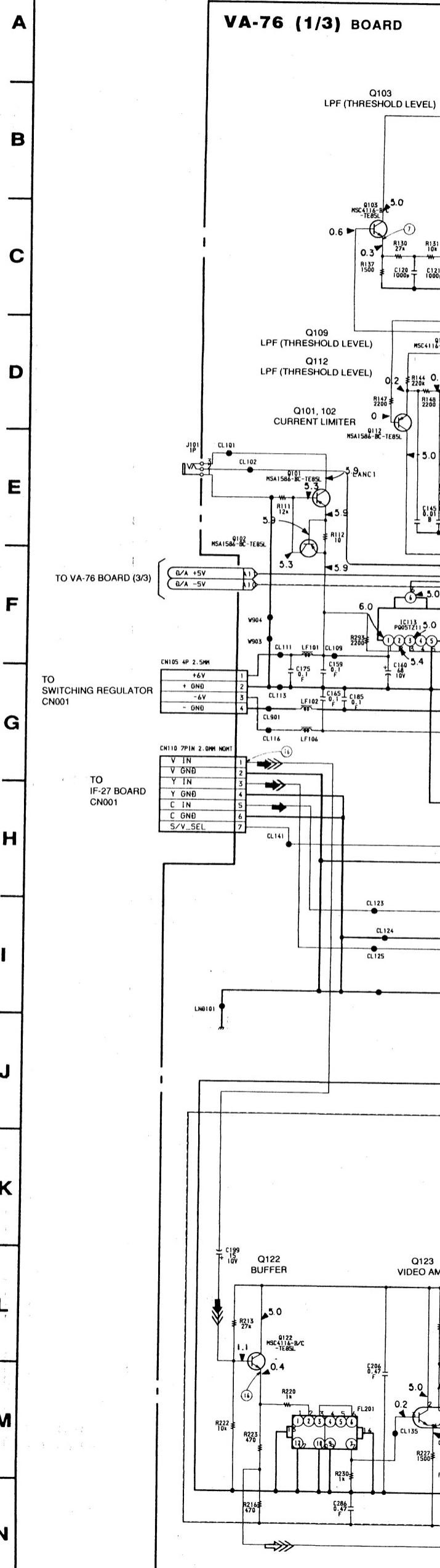


19 20 21 22 23 24 25 26 27



HMDS I-952-971-II

HMPW I-952-972-II



4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING
BOARDS AND SCHEMATIC DIAGRAMS

(In addition to this, the necessary note is printed in each block.)

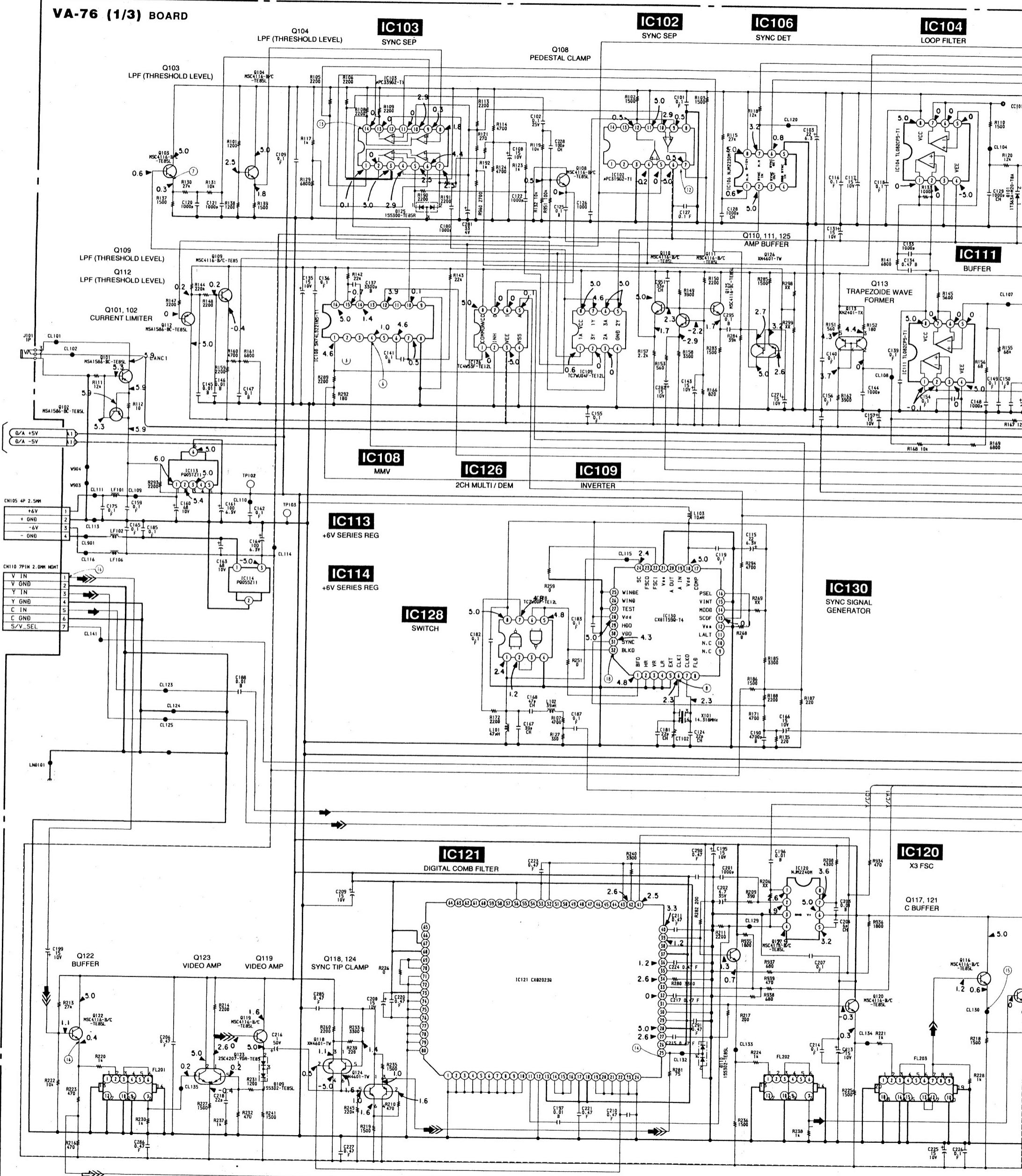
- **For Printed Wiring Boards.**
 -  : Soldering Side.
 -  : Component Side.

 - **For Schematic Diagrams.**
 - Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
 - All resistors are in ohms, 1/10W unless otherwise noted.
 $\text{k}\Omega$: 1000 Ω , M Ω : 1000k Ω .
 - All capacitors are in μF unless otherwise noted.
 pF : $\mu\mu\text{F}$.
50V or less are not indicated except for electrolytics and tantalums.
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
 -  : nonflammable resistor.
 -  : fusible resistor.
 -  : adjustment for repair.
 -  : B+ Line.
 -  : B- Line.
 - Voltages are dc between ground and measurement points.
 - Readings are taken with a color-bar signal input.
 - Readings are taken with a digital multimeter (DC10M Ω).
 - Voltage variations may be noted due to normal production tolerances.

Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque Δ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

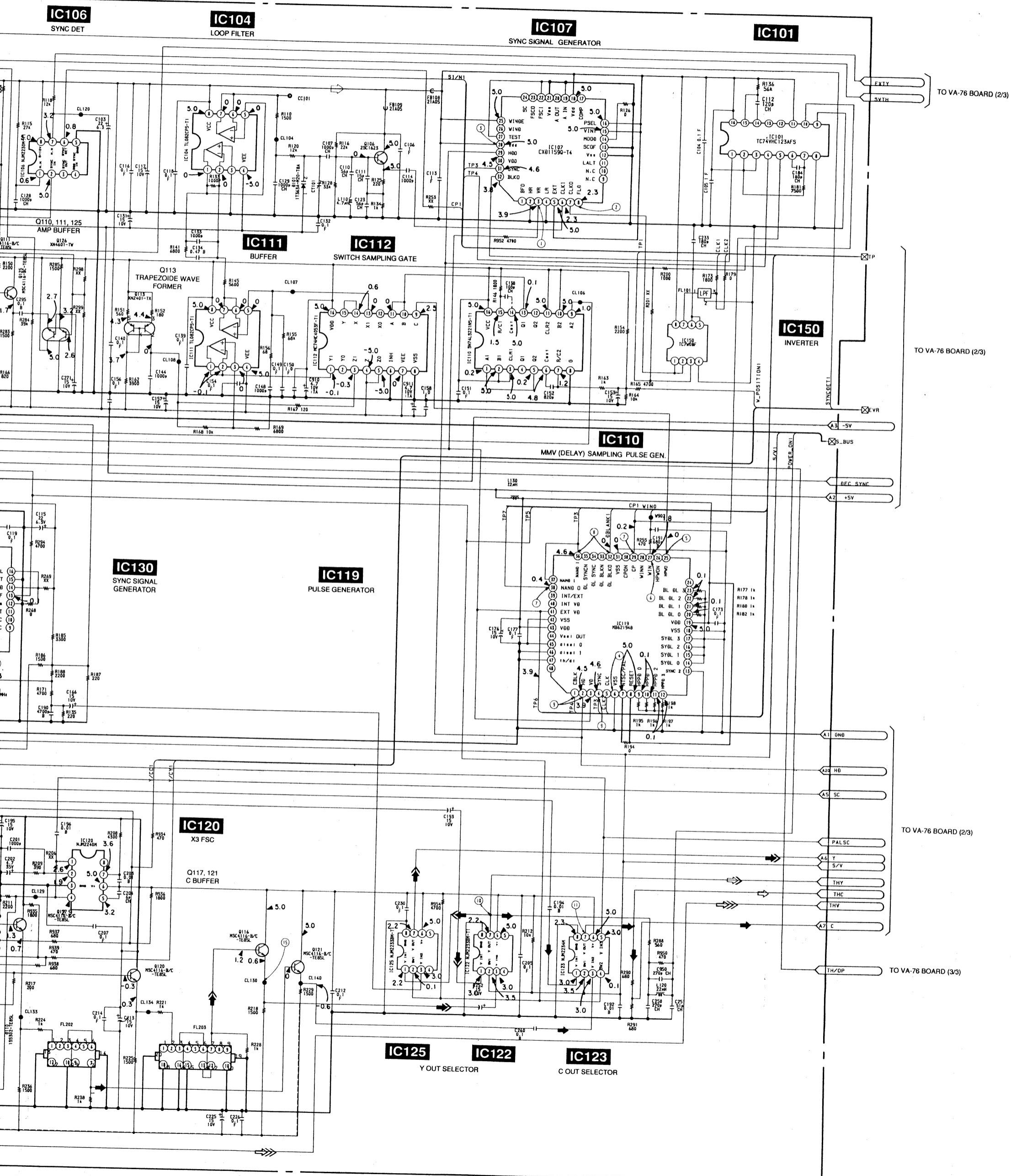
VA-76 (1/3) BOARD



• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	→
PB	→	→	→

10 11 12 13 14 15 16 17 18 19 20 21



- SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡>	➡➡
PB	➡	➡>	➡➡

15

16

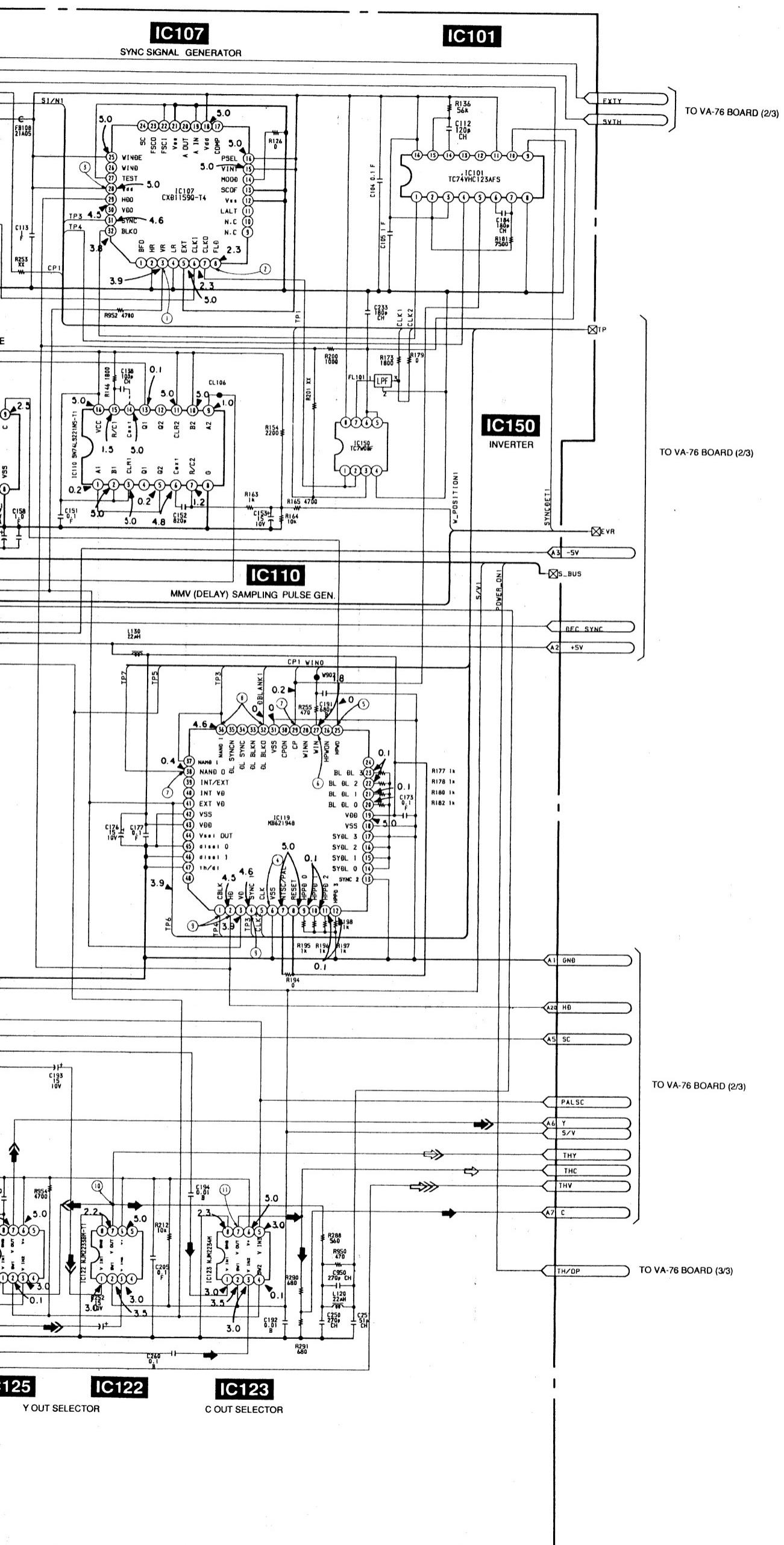
17

18

19

20

21



125

IC122

IC123

G OUT SELECTOR

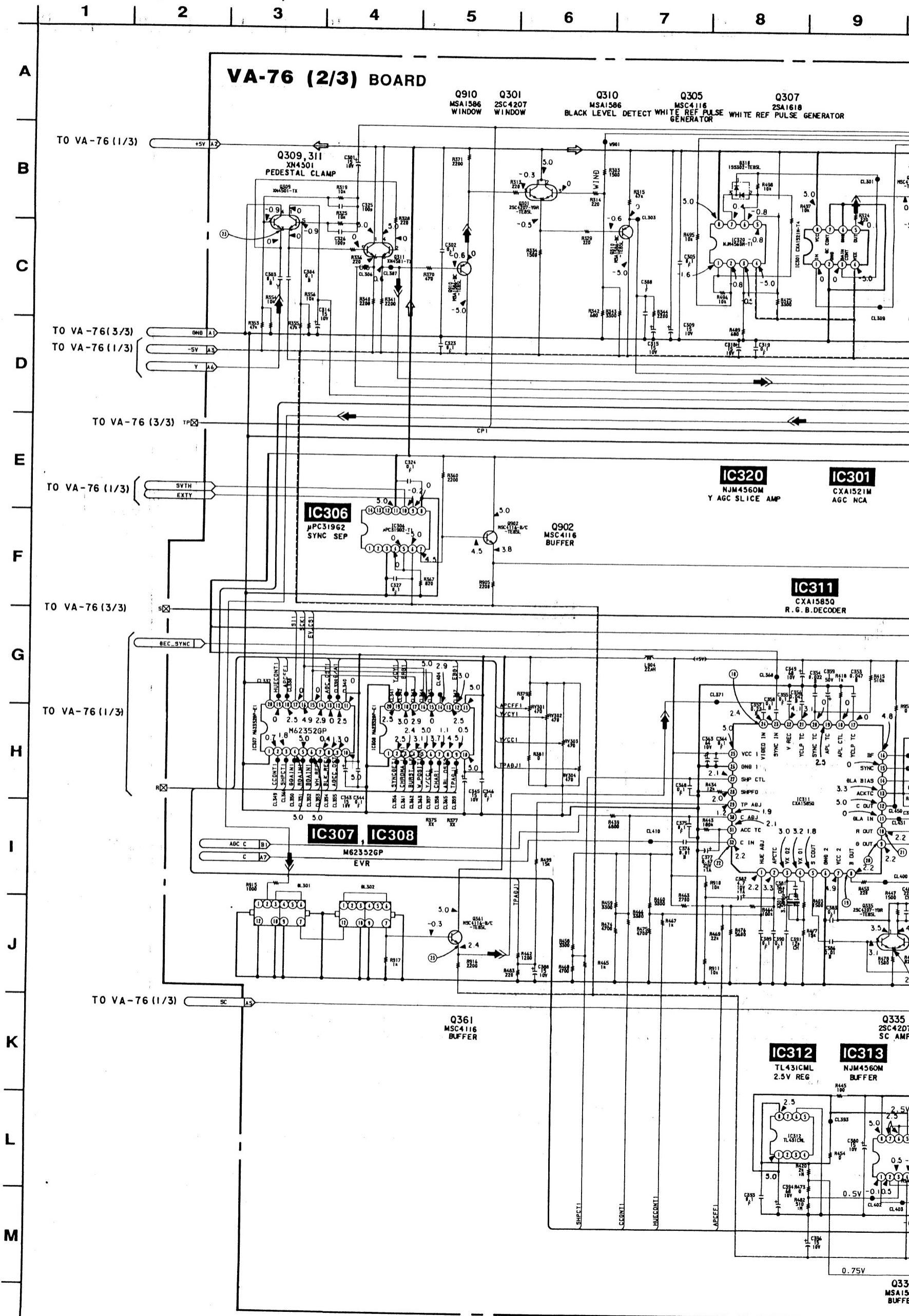
ANALOG VIDEO

ANALOG VIDEOS

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡	
PB			

UP-1200A

VA-76 — 2/3 — (ANALOG VIDEO)



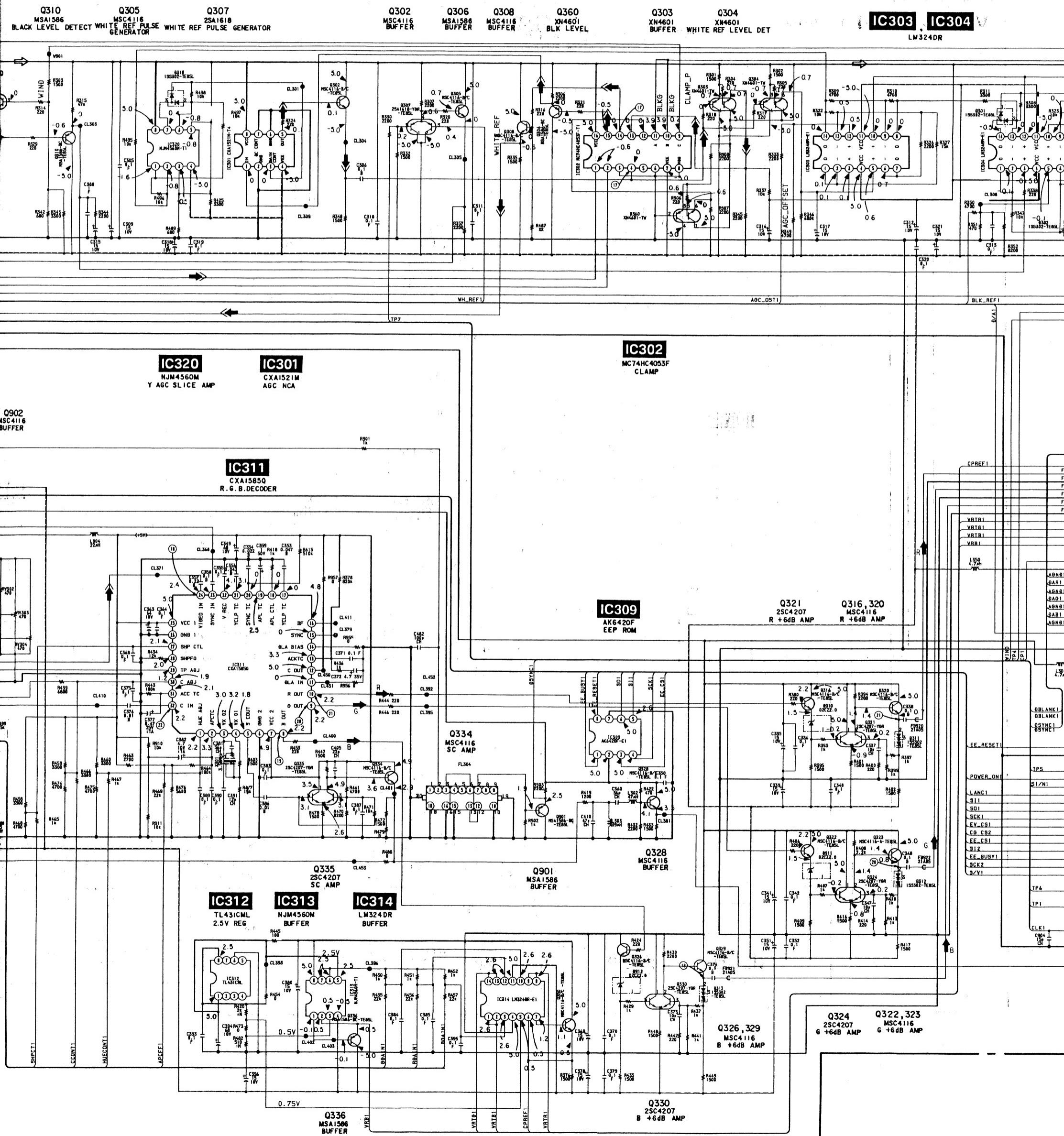
- SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→→	
PB			

• SIGNAL PATH

VIDEO SIGNAL	REC	PB
ANALOG R	→ R	→ R
ANALOG G	→ G	→ G
ANALOG B	→ B	→ B

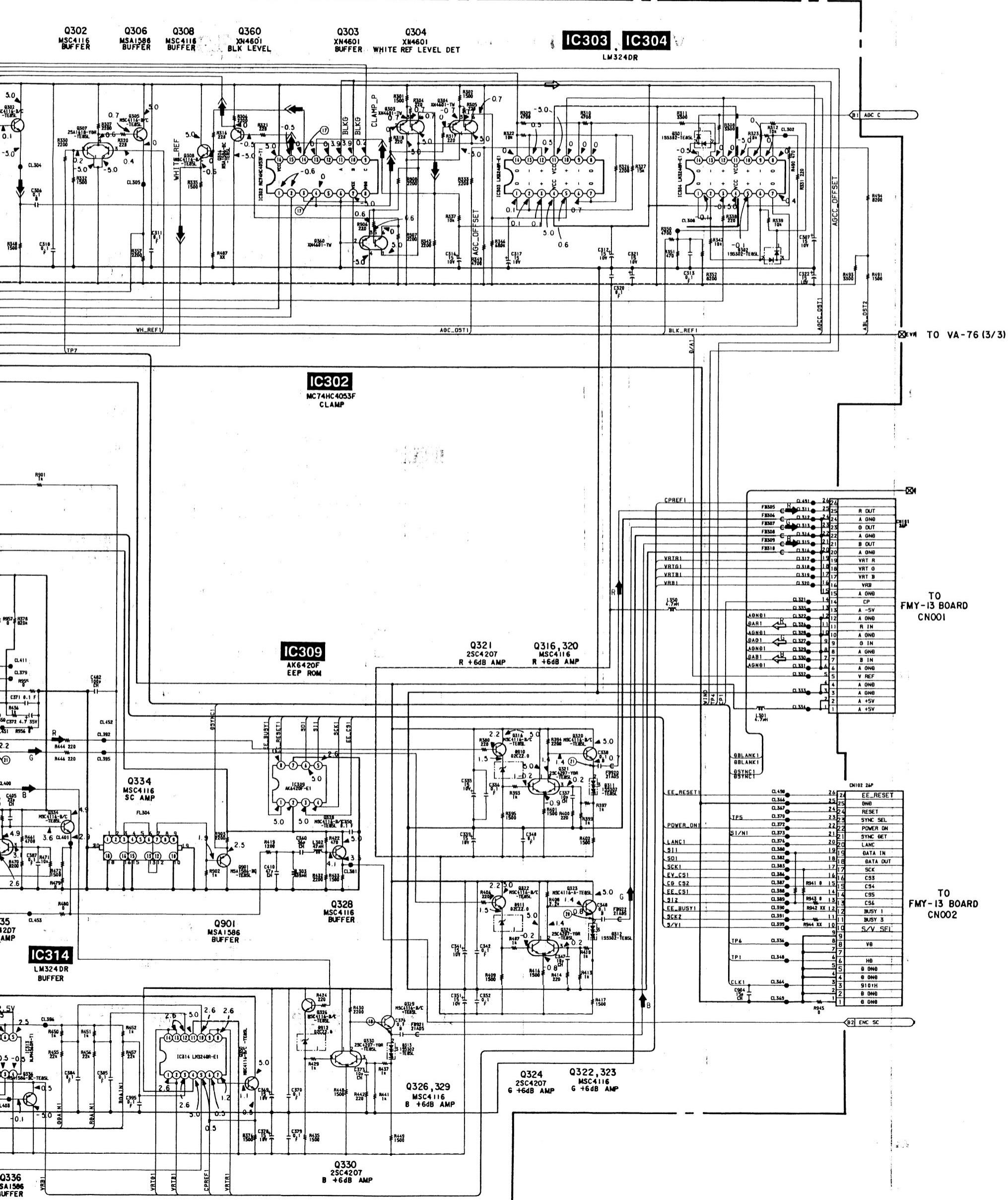
6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17



SIGNAL PATH

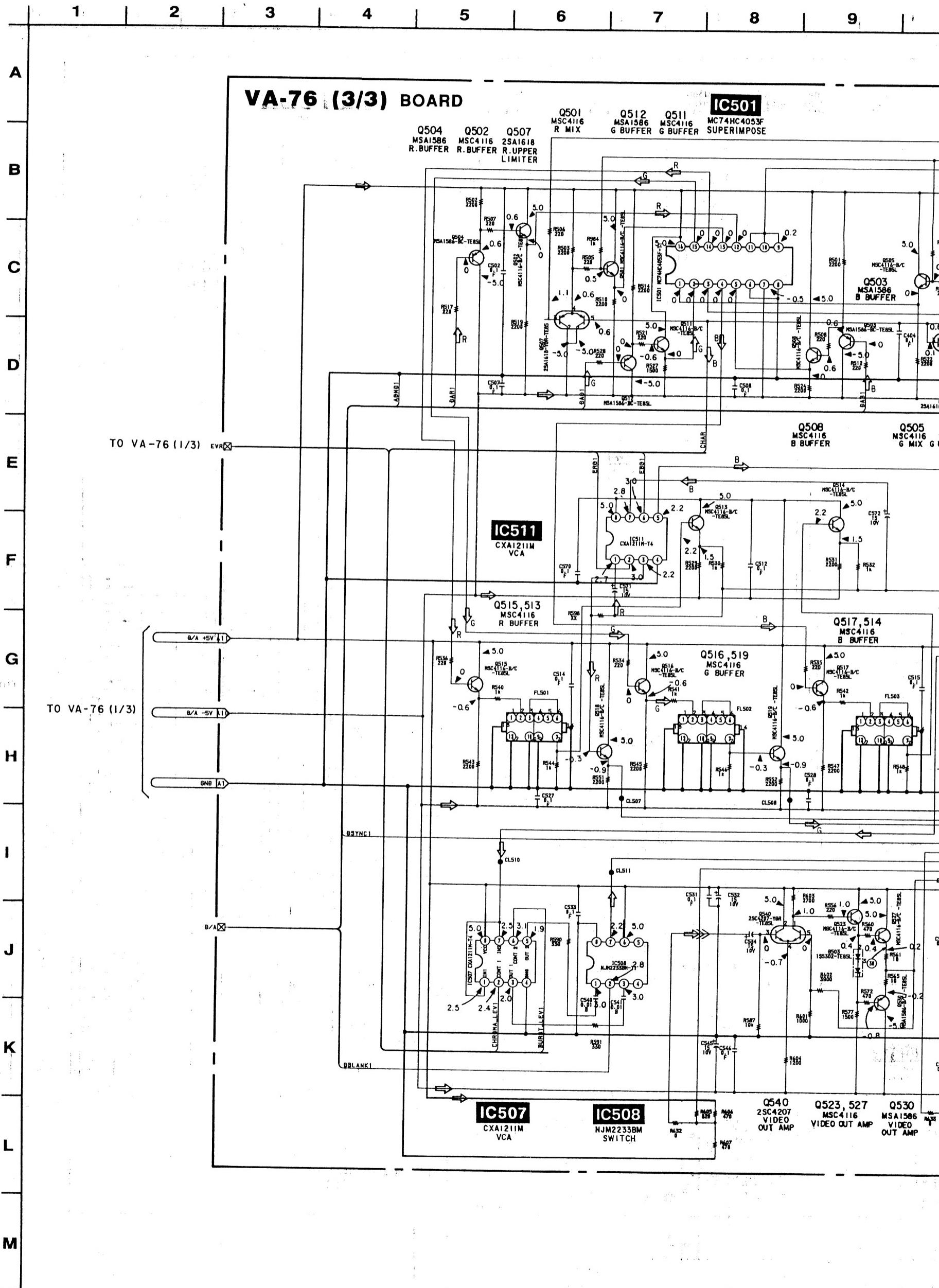
VIDEO SIGNAL	REC	PB
ANALOG R	→ R	⇒ R
ANALOG G	→ G	⇒ G
ANALOG B	→ B	⇒ B

10 11 12 13 14 15 16 17 18 19 20 21



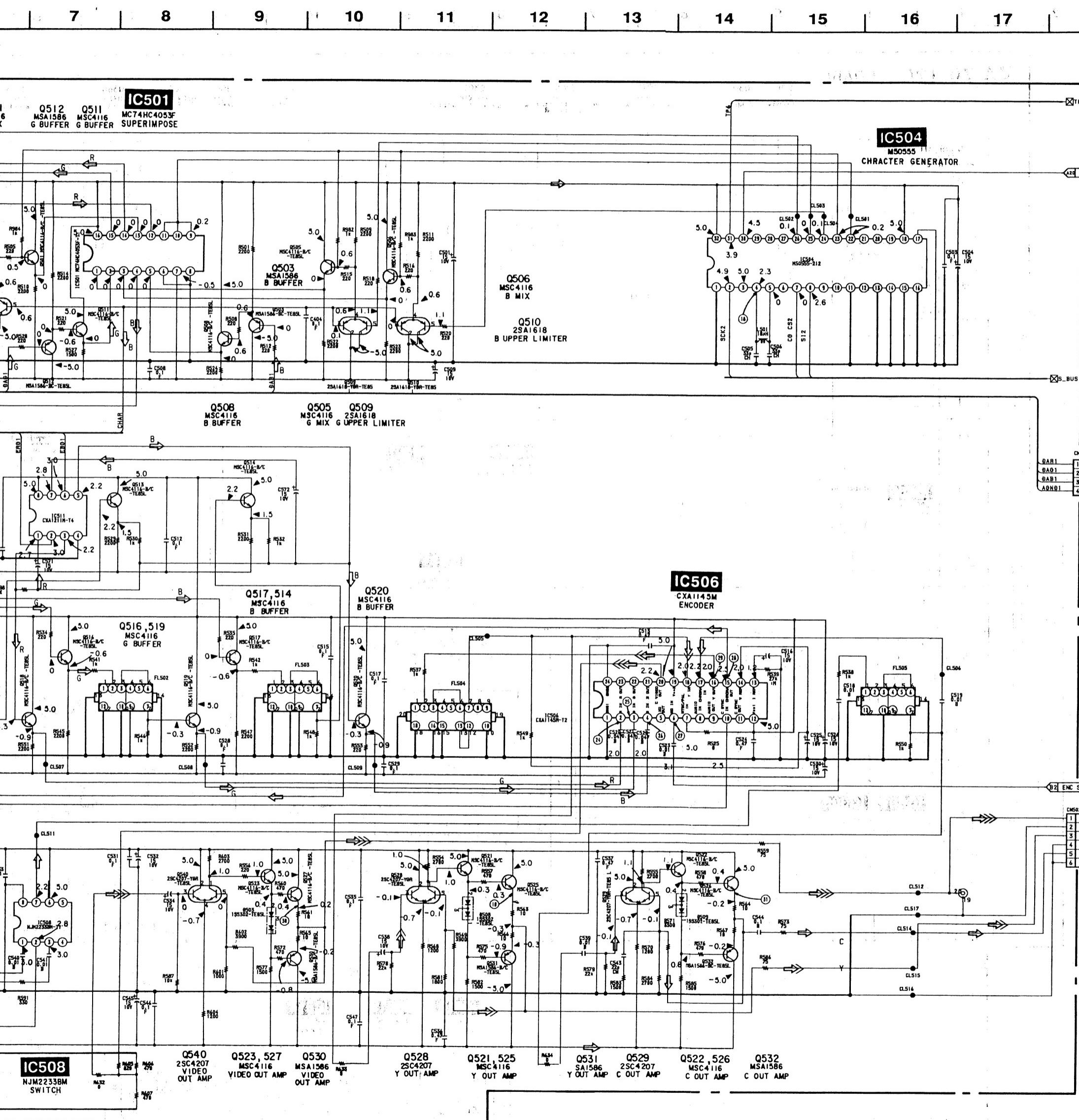
UP-1200A

VA-76 — 3/3 — (ANALOG VIDEO)



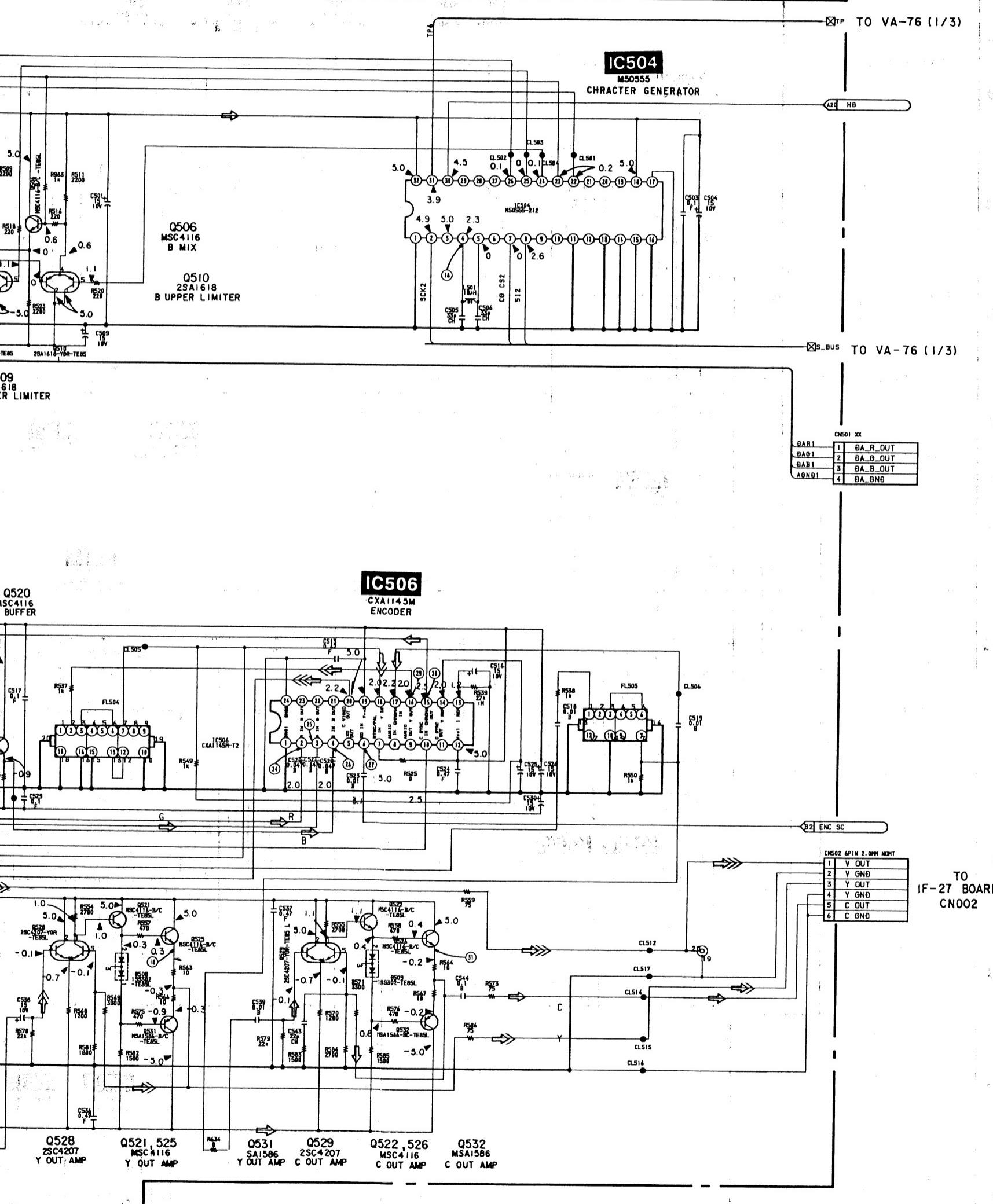
SIGNAL PATH			
	VIDEO SIGNAL		
CHROMA	Y	Y/CHROMA	
REC			
PB	➡	➡➡	➡➡➡

• SIGNAL PATH		
VIDEO SIGNAL	REC	PB
ANALOG R		→ R
ANALOG G		→ G
ANALOG B		→ B



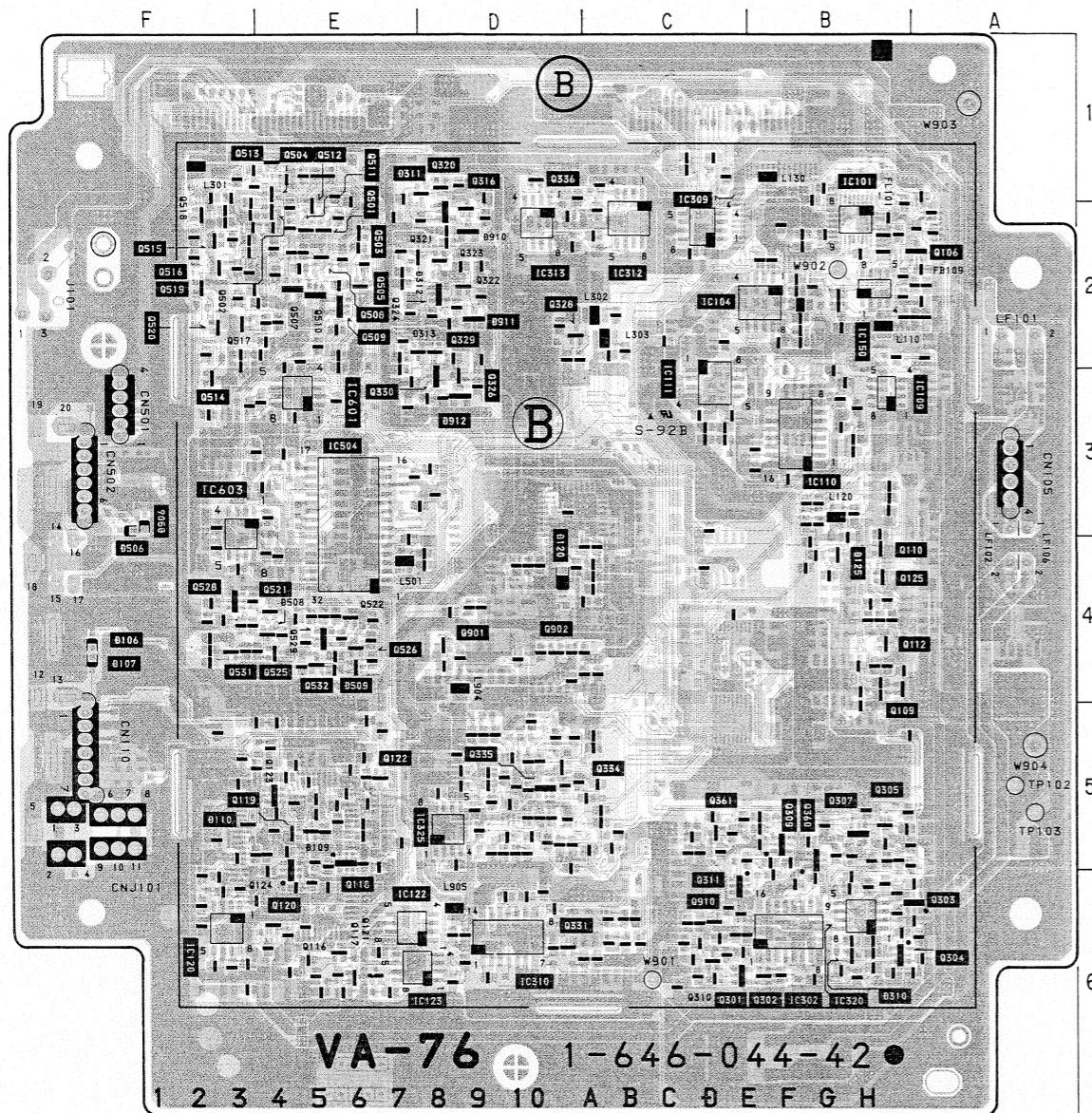
REC	PB
	→ R
	→ G
	→ B

11 12 13 14 15 16 17 18 19

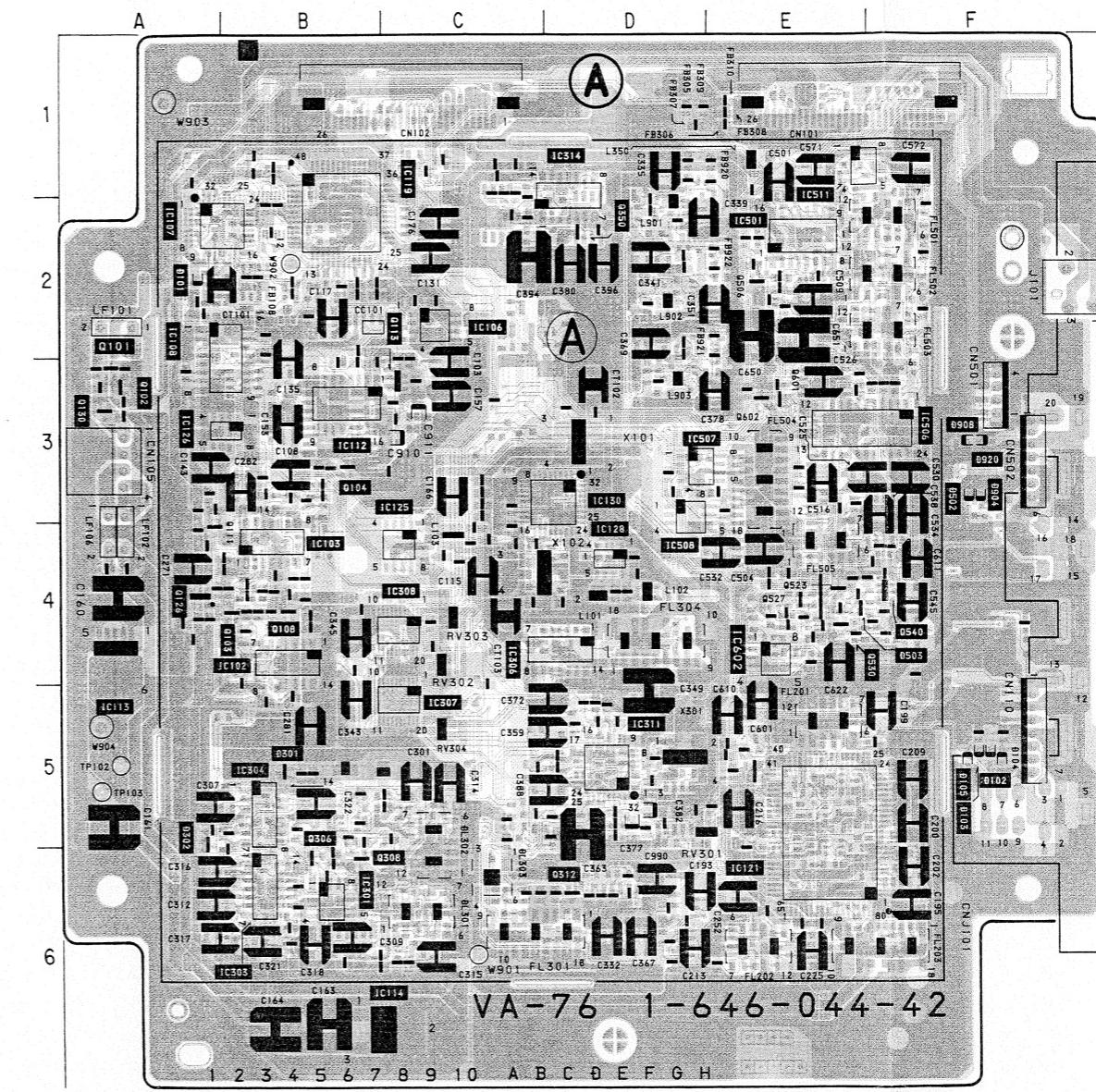


UP-1200A

VA-76 (ANALOG VIDEO)



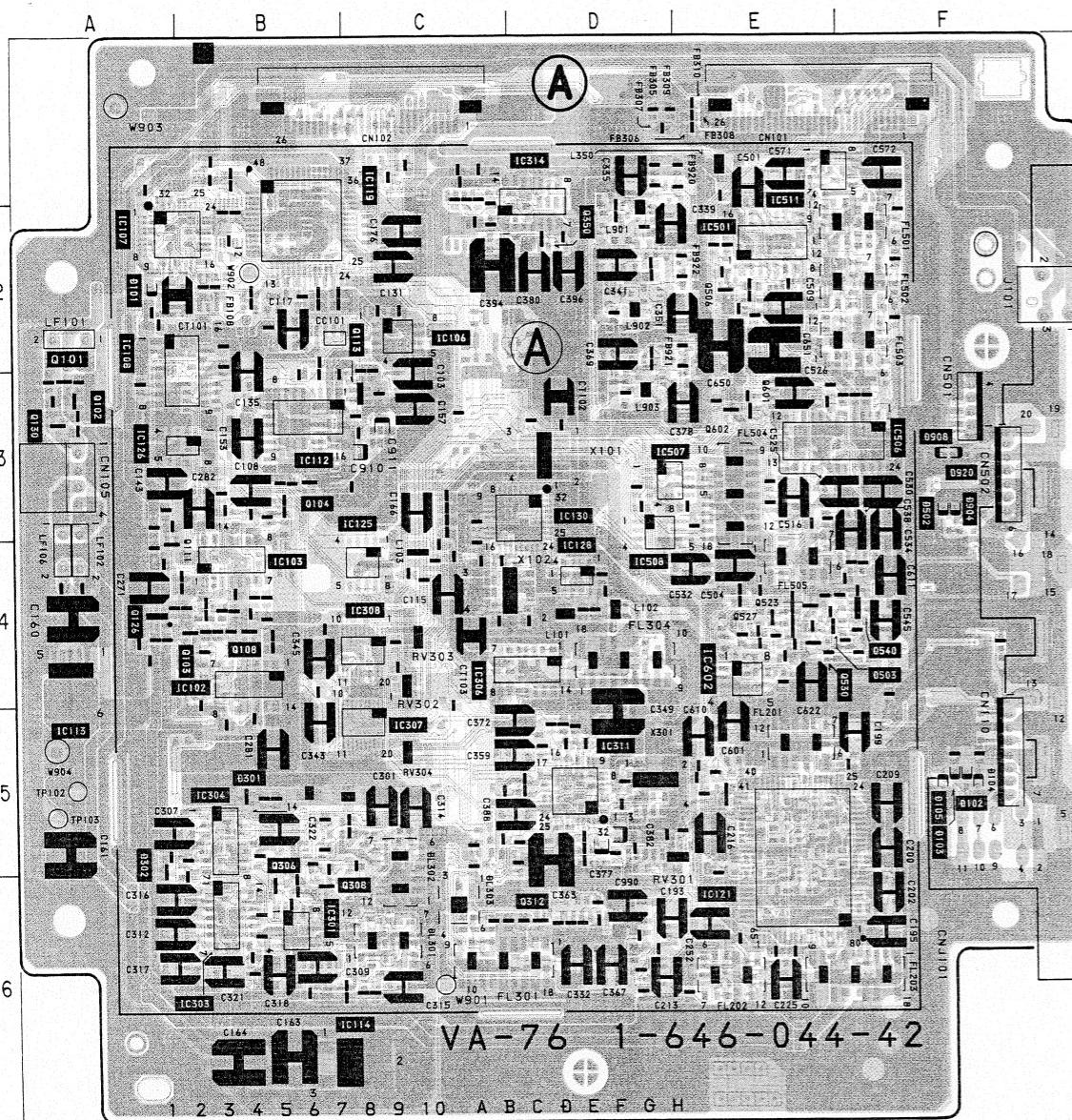
VA-76 -SOLDERING SIDE-
1-646-044-42



VA-76 -COMPONENT SIDE-
1-646-044-42

VA-76 BOARD	
CN101	A-3
CN102	F-5
CN105	F-3
CN110	
CN502	
CT101	B-2
CT102	D-3
D101	A-2
D109	E-5
D110	F-5
D125	B-4
D301	B-5
D302	A-5
D310	B-6
D311	D-1
D312	D-2
D313	D-2
D503	F-4
D508	E-4
D509	E-4
D910	D-2
D911	D-2
D912	D-3
DL301	C-6
DL302	C-5
FB107	B-2
FB108	B-2
FB109	B-2
FB112	F-5
FB121	E-5
FB122	F-4
FB123	F-5
FB304	D-1
FB305	D-1
FB306	D-1
FB307	D-1
FB308	E-1
FB309	E-1
FB310	E-1
FB311	D-1
FB312	D-1
FB313	D-1
FB314	D-1
FB315	D-1
FB316	F-1
FB317	F-1
FB318	F-1
FB319	F-1
FB320	F-1
FB321	F-1
FB322	F-1
FB323	D-1
FB324	E-1
FB325	F-1
FB327	F-1
FB328	C-1
FB329	B-1
FB330	B-1
FB331	C-1
FB332	B-1
FB334	B-1
FB335	A-1

S:SOLDERING



VA-76 -COMPONENT SIDE-
1-646-044-42

VA-76 BOARD

CN101		FB336	C-2	S	Q309	B-5
CN102		FB337	C-1	S	Q310	C-6
CN105	A-3	FB338	C-1	S	Q311	C-6
CN110	F-5	FB339	C-1	S	Q314	D-1
CN502	F-3	FB340	C-2	S	Q320	D-1
		FB343	C-2	S	Q321	D-2
CT101	B-2	S	FB344	C-1	Q322	D-2
CT102	D-3	S	FB345	C-2	Q323	D-2
D101	A-2	S	FB347	B-2	Q326	D-3
D109	E-5		FB348	C-3	Q328	D-2
D110	F-5		FB349	C-2	Q329	D-2
D125	B-4		FB510	E-4	Q330	E-3
D301	B-5	S	FB511	F-4	Q334	C-5
D302	A-5	S	FB512	F-4	Q335	E-2
D310	B-6		FB512	E-1	J101	F-2
D311	D-1		FB920	D-2		Q336
D312	D-2		FB921	E-2	S	Q360
D313	D-2		FB922	L101	D-4	B-5
D503	F-4	S	FL101	B-1	S	C-5
D508	E-4		FL102	F-4	L102	Q501
D509	E-4		FL103	F-4	L110	Q502
D910	D-2		FL104	F-4	L120	B-3
D911	D-2		FL105	F-3	L130	Q503
D912	D-3		FL106	F-4	S	Q504
DL301	C-6	S	FL107	F-4	L141	C-3
DL302	C-5	S	FL201	E-4	S	Q505
			FL202	E-6	L301	Q506
			FL203	F-6	S	Q507
FB107	B-2		FL304	D-4	S	Q508
FB108	B-2	S	FL501	F-2	L302	E-2
FB109	B-2		FL502	F-2	S	Q509
FB112	F-5		FL503	F-2	S	Q510
FB121	E-5		FL504	E-3	FL101	E-1
FB122	F-4	S	FL505	E-4	S	Q511
FB123	F-5				FL102	E-1
FB304	D-1	S	IC101	B-1	A-2	F-2
FB305	D-1	S	IC102	B-4	S	Q512
FB306	D-1	S	IC103	B-4	S	Q513
FB307	D-1	S	IC104	C-2	S	Q514
FB308	E-1	S	IC106	C-2	S	Q515
FB309	D-1	S	IC107	A-2	S	Q516
FB310	E-1	S	IC108	A-2	S	Q517
FB311	D-1	S	IC109	A-3	B-4	F-2
FB312	D-1	S	IC110	A-3	S	Q518
FB313	D-1	S	IC111	C-3	S	Q519
FB314	D-1	S	IC112	B-3	S	Q520
FB315	D-1	S	IC113	A-5	S	Q521
FB316	F-1	S	IC114	B-6	S	Q522
FB317	F-1	S	IC119	C-1	S	Q523
FB318	F-1	S	IC120	F-6	E-4	F-4
FB319	F-1	S	IC121	E-6	S	Q524
FB320	F-1	S	IC122	E-6	S	Q525
FB321	F-1	S	IC123	D-6	E-6	S
FB322	F-1	S	IC125	B-3	S	Q526
FB323	D-1	S	IC126	A-3	S	Q527
FB324	E-1	S	IC128	D-4	S	Q528
FB325	F-1		IC130	D-3	S	Q529
FB327	F-1	S	IC301	B-6	S	Q530
FB328	C-1	S	IC302	B-6	S	Q531
FB329	B-1	S	IC303	A-6	S	Q532
FB330	B-1	S	IC304	B-5	S	Q533
FB331	C-1		IC306	C-4	S	Q534
FB332	B-1	S	IC307	C-5	S	Q535
FB334	B-1		IC308	C-4	S	Q536
FB335	A-1		IC309	C-2	S	Q537
				B-6	S	Q538

S:SOLDERING SIDE

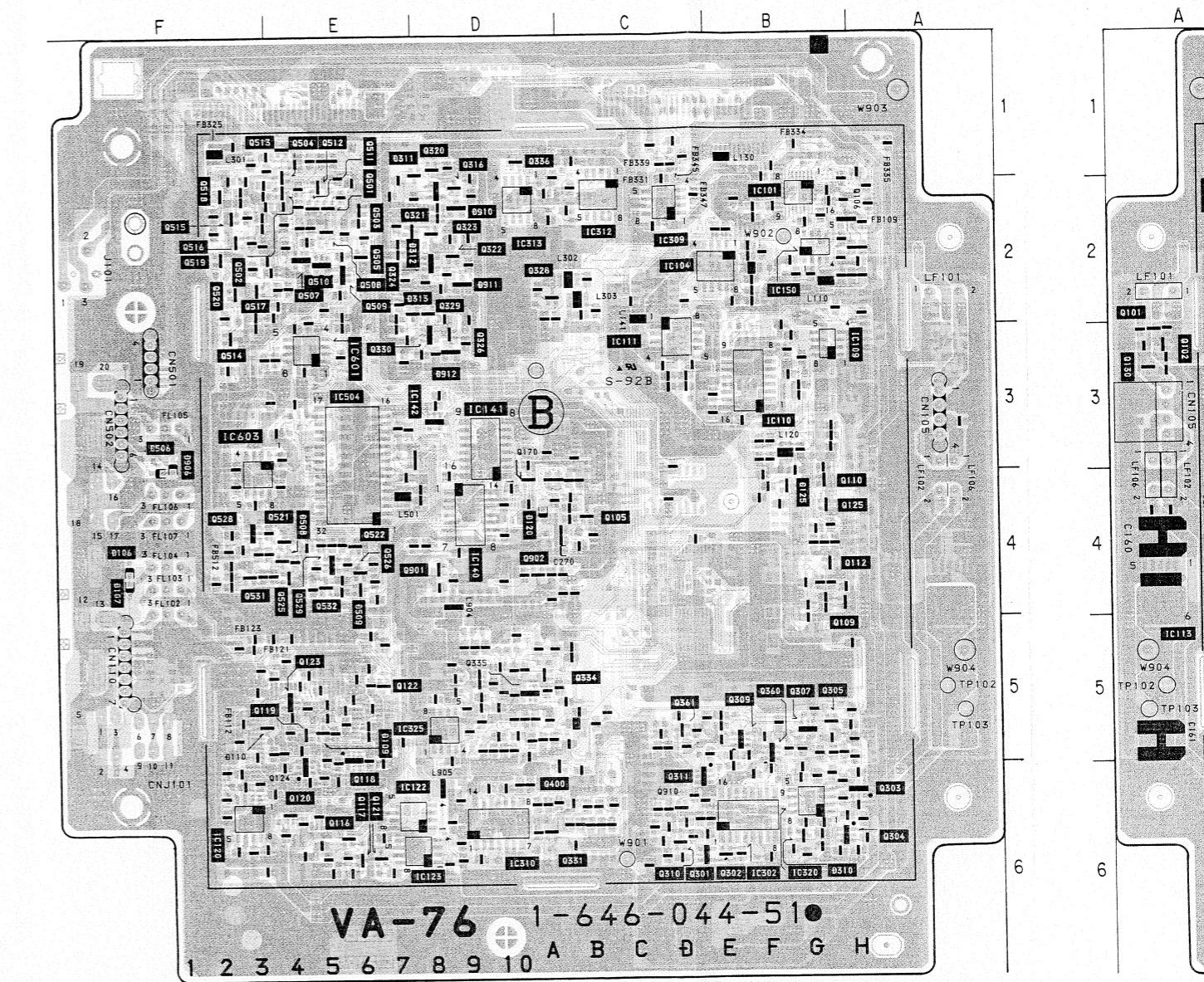
UP-1200AEPM

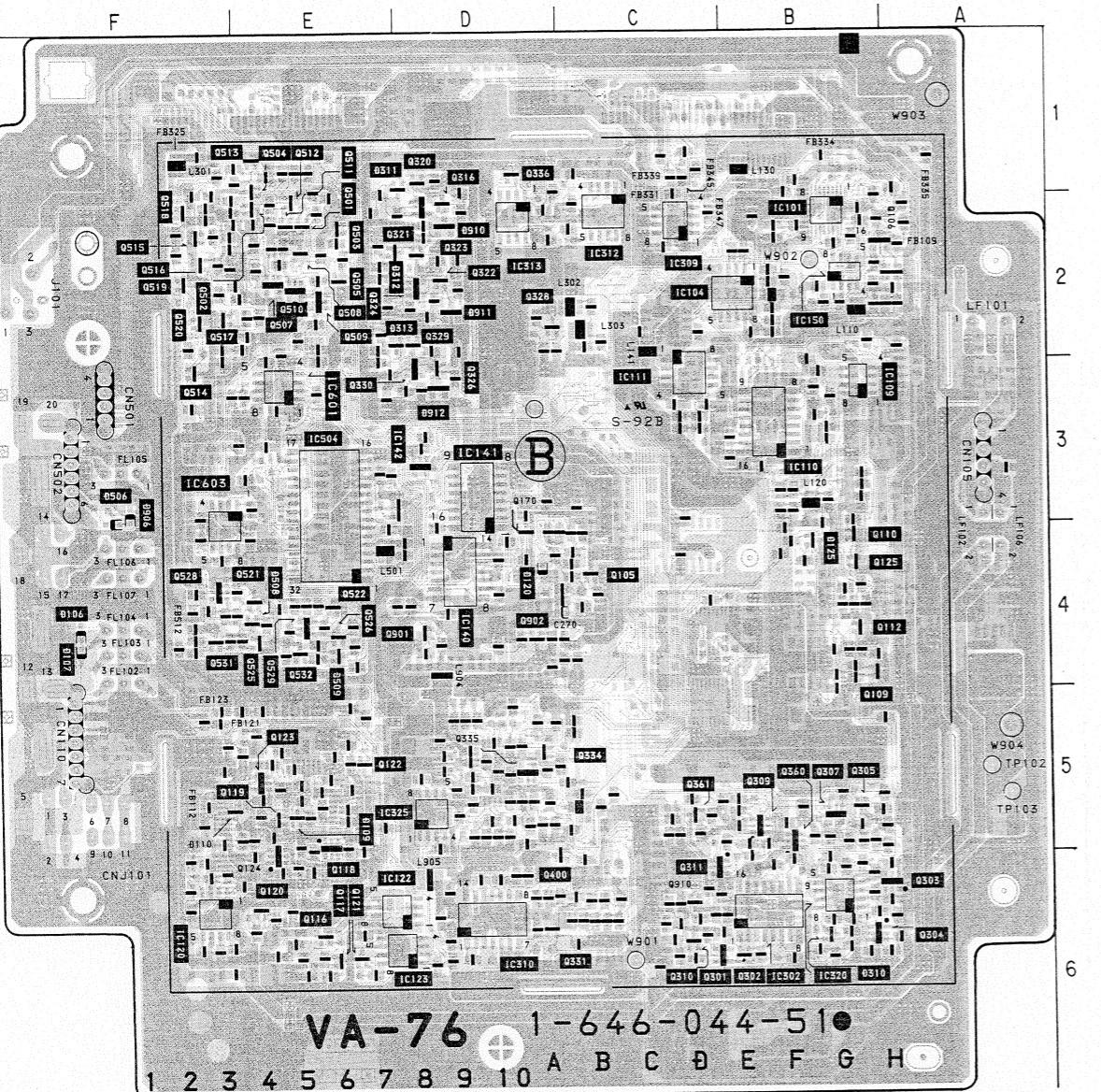
VA-76(B) (ANALOG VIDEO)

VA-76(B) BOARD

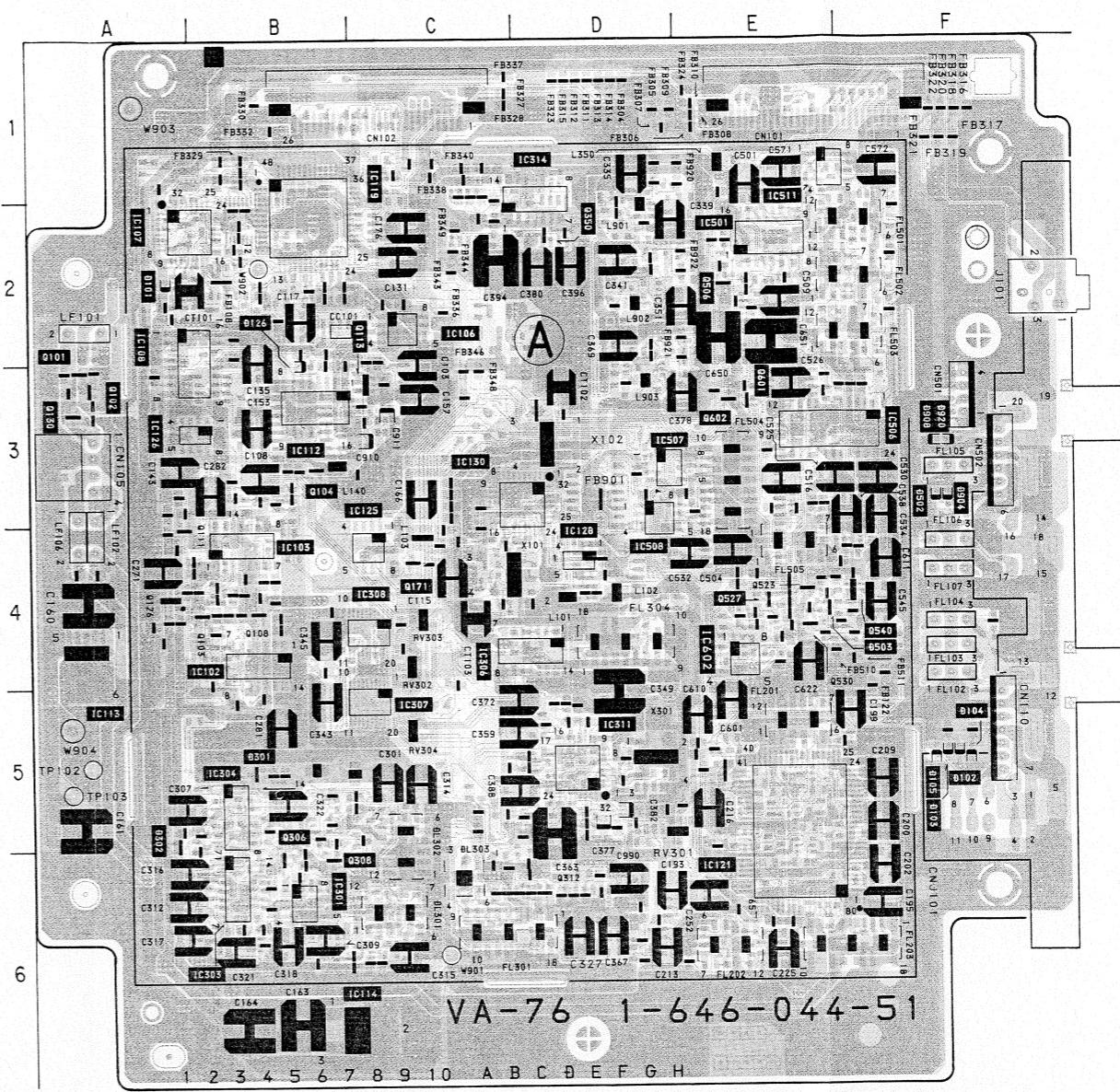
CN101	E-1 S	FB337	C-1 S	IC320	B-5	Q309	B-5
CN102	C-1 S	FB338	C-1 S	IC501	E-2 S	Q310	C-6
CN105	A-3 S	FB339	C-1	IC504	E-3 S	Q311	B-5
CN110	F-5 S	FB340	C-1 S	IC506	E-3 S	Q312	D-5
CN502	F-3 S	FB343	C-2 S	IC507	D-3 S	Q316	D-1
CT101	A-2 S	FB344	C-1 S	IC508	D-3 S	Q320	D-1
CT102	D-2 S	FB346	C-2 S	IC601	E-1 S	Q321	D-2
D101	A-2 S	FB347	B-2	IC602	E-2 S	Q322	D-2
D109	E-5	FB348	C-2 S	IC603	E-4 S	Q323	D-2
D110	E-5	FB349	C-2 S	J101	F-2 S	Q326	D-3
D125	B-3	FB510	E-4 S	L101	D-4 S	Q328	C-2
D126	B-2 S	FB512	E-4	L102	D-4 S	Q330	D-2
D301	B-5 S	FB901	D-3 S	L102	D-4 S	Q331	C-6
D302	A-5 S	FB920	D-1 S	L103	C-3 S	Q334	C-5
D310	B-6	FB921	D-2 S	L110	B-2	Q335	D-5
D311	D-1	FB922	E-2 S	L120	B-3	Q336	D-1
D312	D-2			L130	B-1	Q350	C-2
D313	D-2	FL102	F-4 S	L140	B-3 S	Q360	B-5
D503	E-4 S	FL103	F-4 S	L141	C-2	Q361	C-5
D508	E-4	FL104	F-4 S	L301	E-1	Q501	E-2
D509	E-4	FL105	F-3 S	L302	C-2	Q502	E-1
D910	D-2	FL106	F-3 S	L303	C-2	Q503	F-2
D911	D-2	FL107	F-4 S	L350	D-1 S	Q504	E-1
D912	D-3	FL201	E-4 S	L501	D-3	Q505	E-2
DL301	C-6 S	FL203	E-6 S	L902	D-2 S	Q507	E-2
DL302	C-5 S	FL301	C-6 S	L903	D-2 S	Q508	E-2
DL303	C-5 S	FL304	D-4 S	L904	D-4	Q509	E-2
FLB107	B-2	FL502	E-2 S	L905	D-5	Q510	E-2
FB108	B-2 S	FL503	E-2 S	LF101	A-2	Q512	E-1
FB109	B-2	FL504	E-3 S	LF102	A-3	Q513	E-1
FB112	E-5	FL505	E-3 S	LF106	A-3	Q514	E-2
FB121	E-4					Q515	E-2
FB122	E-4 S	IC102	B-4 S	Q101	A-2 S	Q516	E-2
FB123	E-5	IC103	B-3 S	Q102	A-2 S	Q517	E-2
FB304	D-1 S	IC104	B-2	Q103	A-4 S	Q518	E-2
FB305	D-1 S	IC106	C-2 S	Q104	B-3 S	Q519	E-2
FB306	D-1 S	IC107	A-2 S	Q105	C-4	Q520	E-2
FB307	D-1 S	IC108	A-2 S	Q106	A-2	Q521	E-4
FB308	D-1 S	IC109	B-2	Q108	B-4 S	Q522	E-4
FB309	D-1 S	IC110	B-3	Q109	B-4	Q523	E-4 S
FB310	D-1 S	IC111	C-2	Q110	B-3	Q525	E-4
FB311	D-1 S	IC112	B-3 S	Q111	A-3 S	Q526	E-4
FB312	D-1 S	IC113	A-4 S	Q112	B-4	Q527	E-4 S
FB313	D-1 S	IC114	B-6 S	Q113	B-2 S	Q528	E-4
FB314	D-1 S	IC119	B-2 S	Q116	E-6	Q529	E-4
FB315	D-1 S	IC121	E-5 S	Q117	E-6	Q530	E-4 S
FB316	F-1 S	IC122	D-5	Q118	E-5	Q531	E-4
FB317	F-1 S	IC123	D-6	Q119	E-5	Q532	E-4
FB318	F-1 S	IC125	B-3 S	Q120	D-6	Q540	E-4 S
FB319	F-1 S	IC126	A-3 S	Q121	D-6	Q601	E-3 S
FB320	F-1 S	IC128	D-3 S	Q122	E-5	Q602	E-3 S
FB321	F-1 S	IC130	C-3 S	Q123	E-5	Q901	D-4
FB322	F-1 S	IC301	B-5 S	Q124	E-5	Q902	C-4
FB323	D-1 S	IC302	B-5	Q125	B-3	Q910	C-5
FB324	D-1 S	IC303	B-5 S	Q126	A-4 S		
FB325	E-1	IC304	B-5 S	Q170	C-3	RV301	D-5 S
FB327	C-1 S	IC306	C-4 S	Q171	C-3 S	RV302	C-4 S
FB328	C-1 S	IC307	B-4 S	Q301	B-6	RV303	C-4 S
FB329	B-1 S	IC308	B-4 S	Q302	B-6	RV304	C-4 S
FB330	B-1 S	IC309	C-2	Q303	A-5		
FB331	C-1	IC310	D-6	Q304	A-6	X101	C-4 S
FB332	B-1 S	IC311	D-5 S	Q305	B-5	X102	D-3 S
FB334	B-1 S	IC312	C-2	Q306	B-5 S	X301	D-5 S
FB335	A-1	IC313	D-2	Q307	B-5		
FB336	C-2 S	IC314	C-1 S	Q308	B-5 S		

S:SOLDERING SIDE

VA-76 -SOLDERING SIDE-
1-646-044-51



VA-76 -SOLDERING SIDE-
1-646-044-51



VA-76 -COMPONENT SIDE-
1-646-044-51

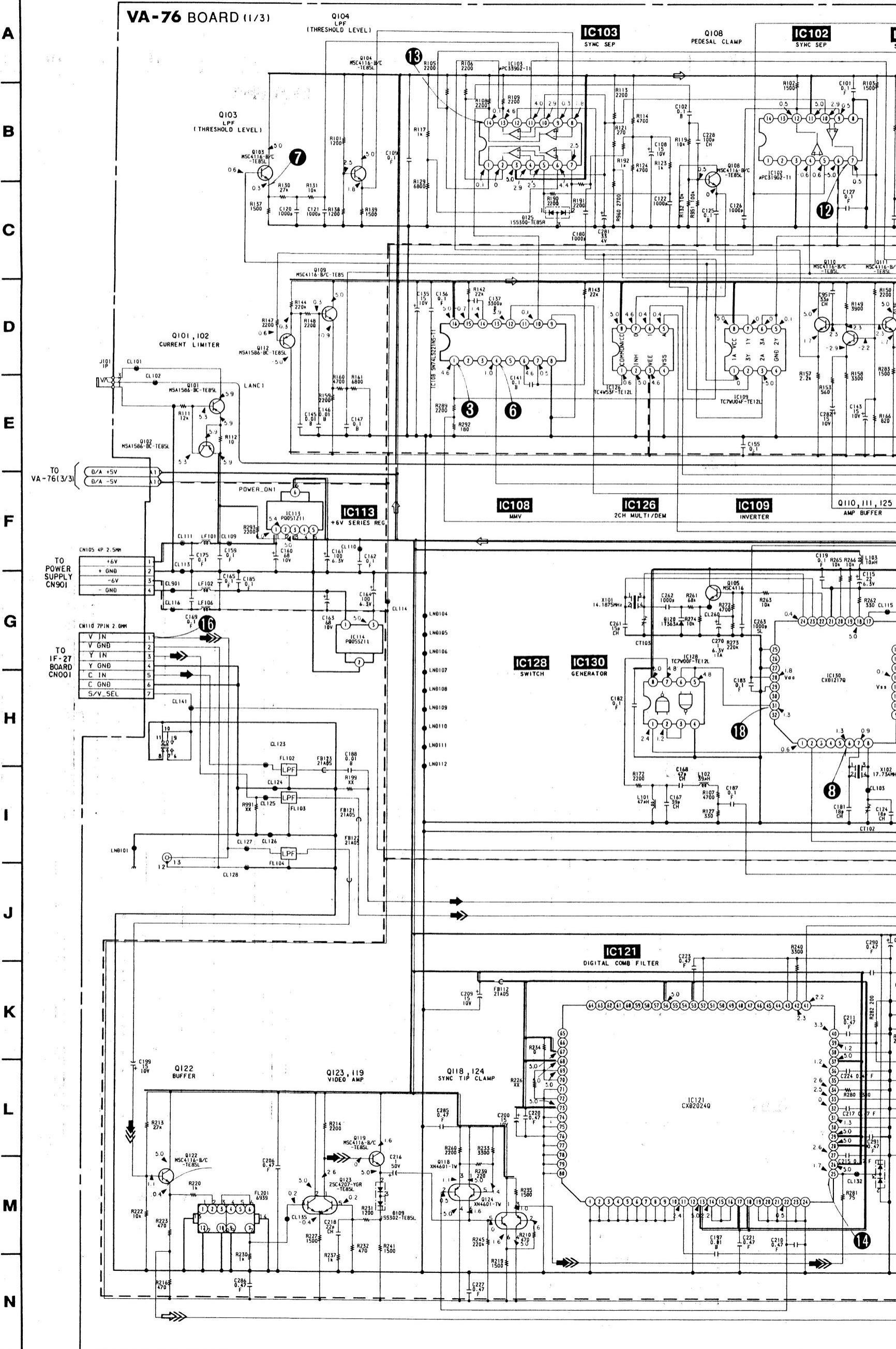
ANALOG VIDEO
VA-76(B)

ANALOG VIDEO
VA-76(B)

UP-1200AEPM

VA-76(B) — 1/3 — (ANALOG VIDEO)

1 | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9**



	VIDEO	
	CHROMA	Y
REC	➡	➡
PB	⇒	⇒

6

7

8

10

11

12

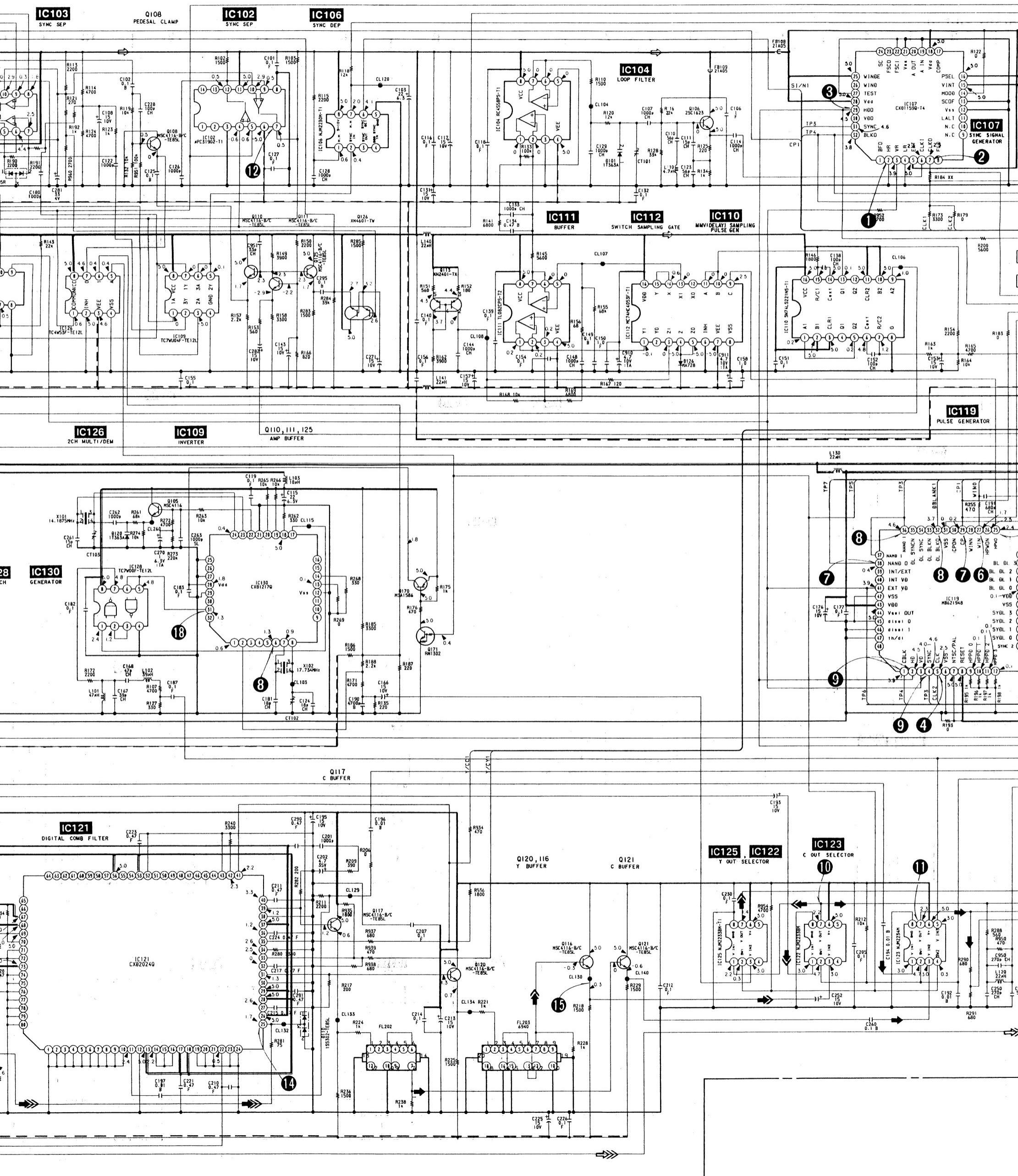
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14

15

16

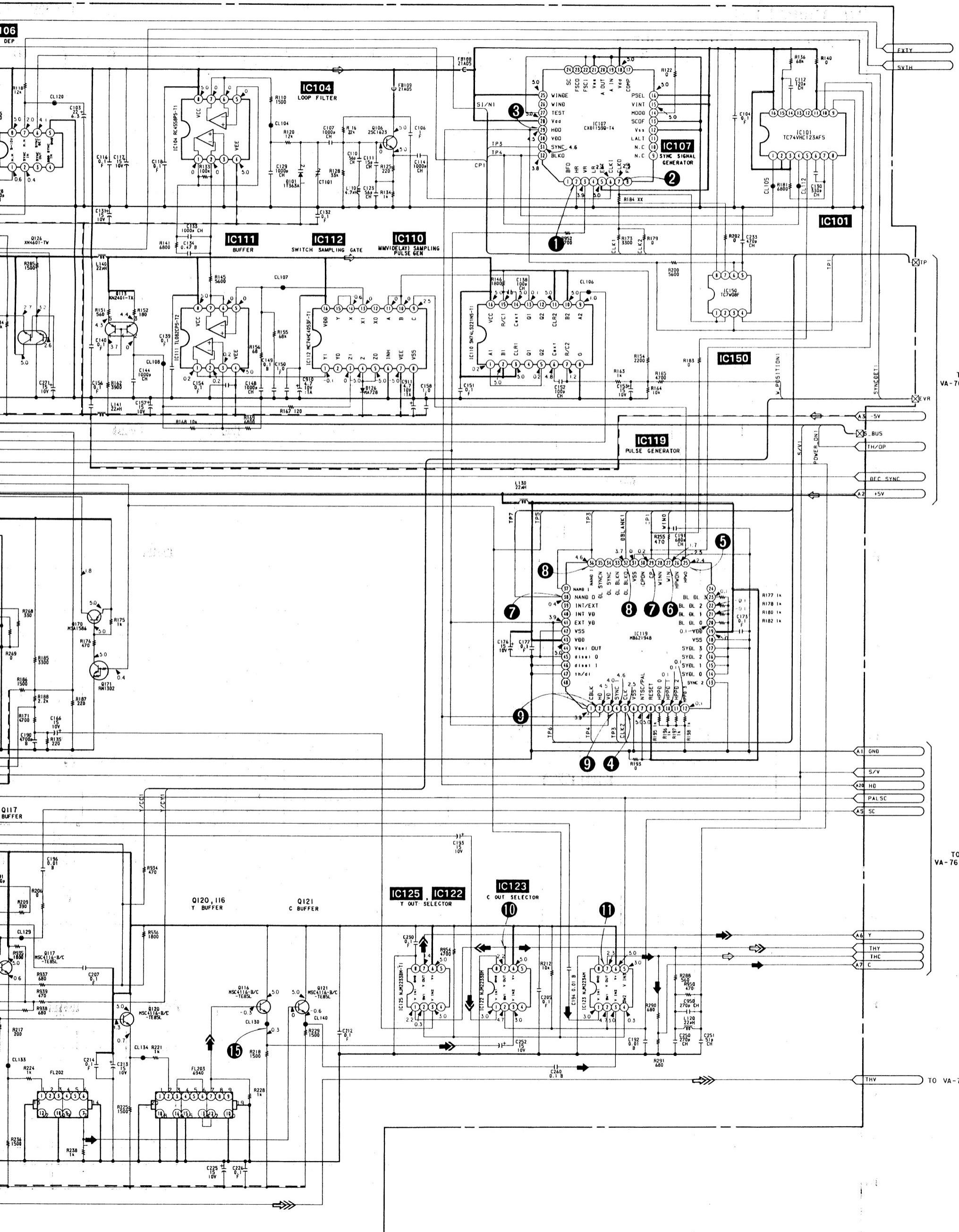
17



• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	→	→	→
PB	⇒	⇒	⇒

10 11 12 13 14 15 16 17 18 19 20



UP-1200AEPM

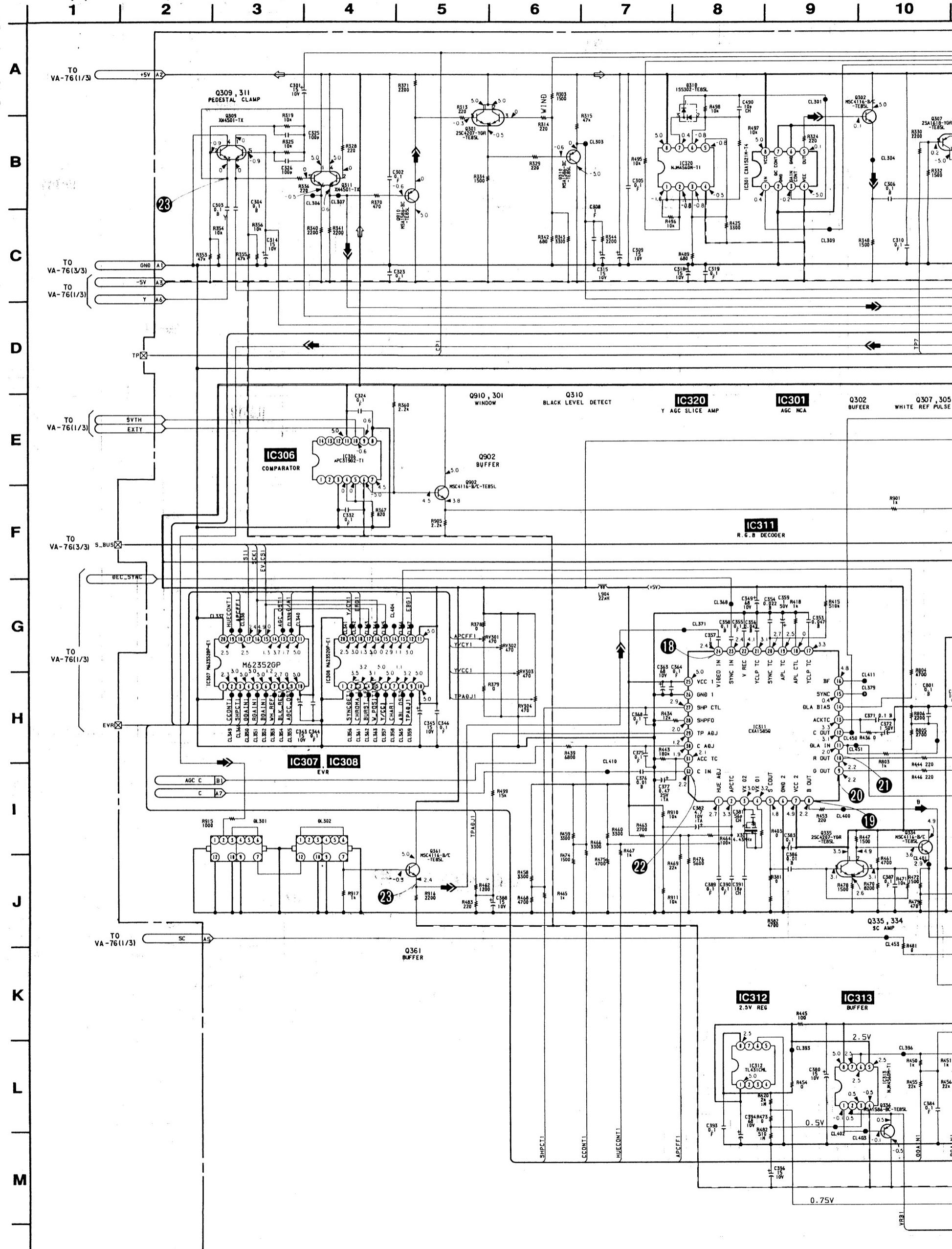
VA-76(B) — 2/3 — (ANALOG VIDEO)

• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡	
PB			

• SIGNAL PATH

	VIDEO SIGNAL		
	ANALOG R	ANALOG G	ANALOG B

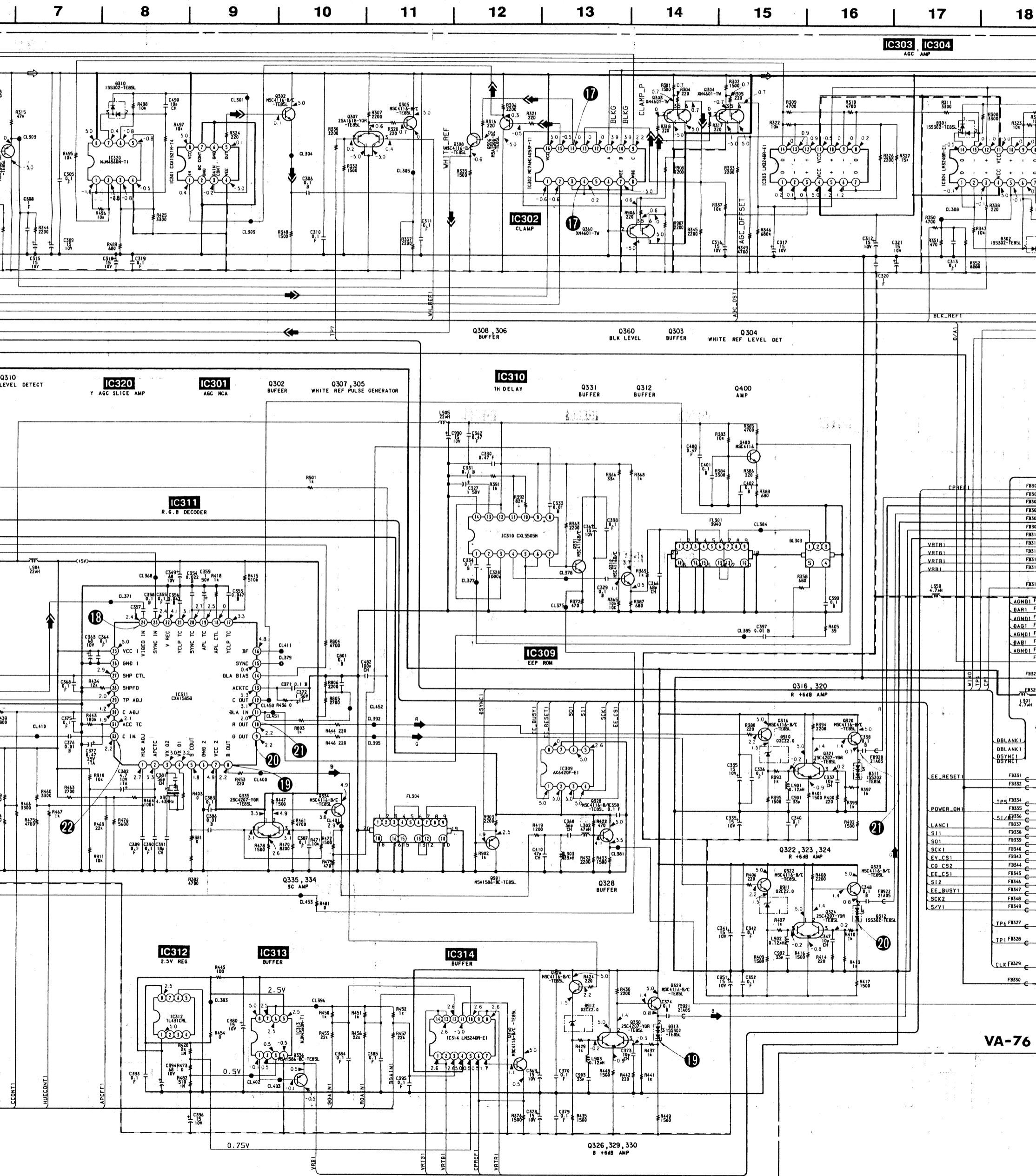


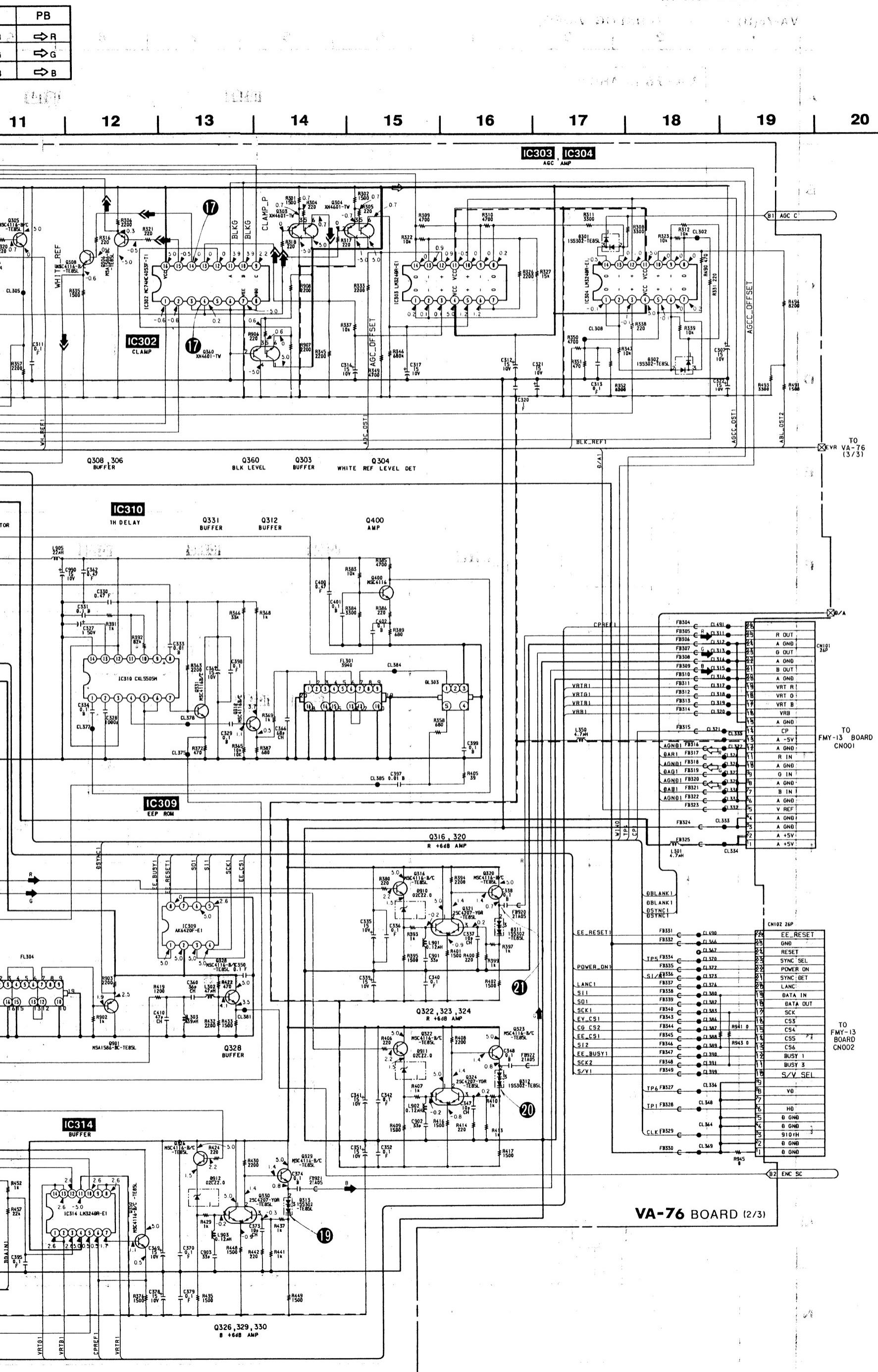
• SIGNAL PATH

	VIDEO SIGNAL	
	CHROMA	Y
REC	→	→
PB		

• SIGNAL PATH

VIDEO SIGNAL	REC	PB
ANALOG R	→ R	→ R
ANALOG G	→ G	→ G
ANALOG B	→ B	→ B





UP-1200AEPM

VA-76(B) — 3/3 — (ANALOG VIDEO)

1

3

4

5

6

7

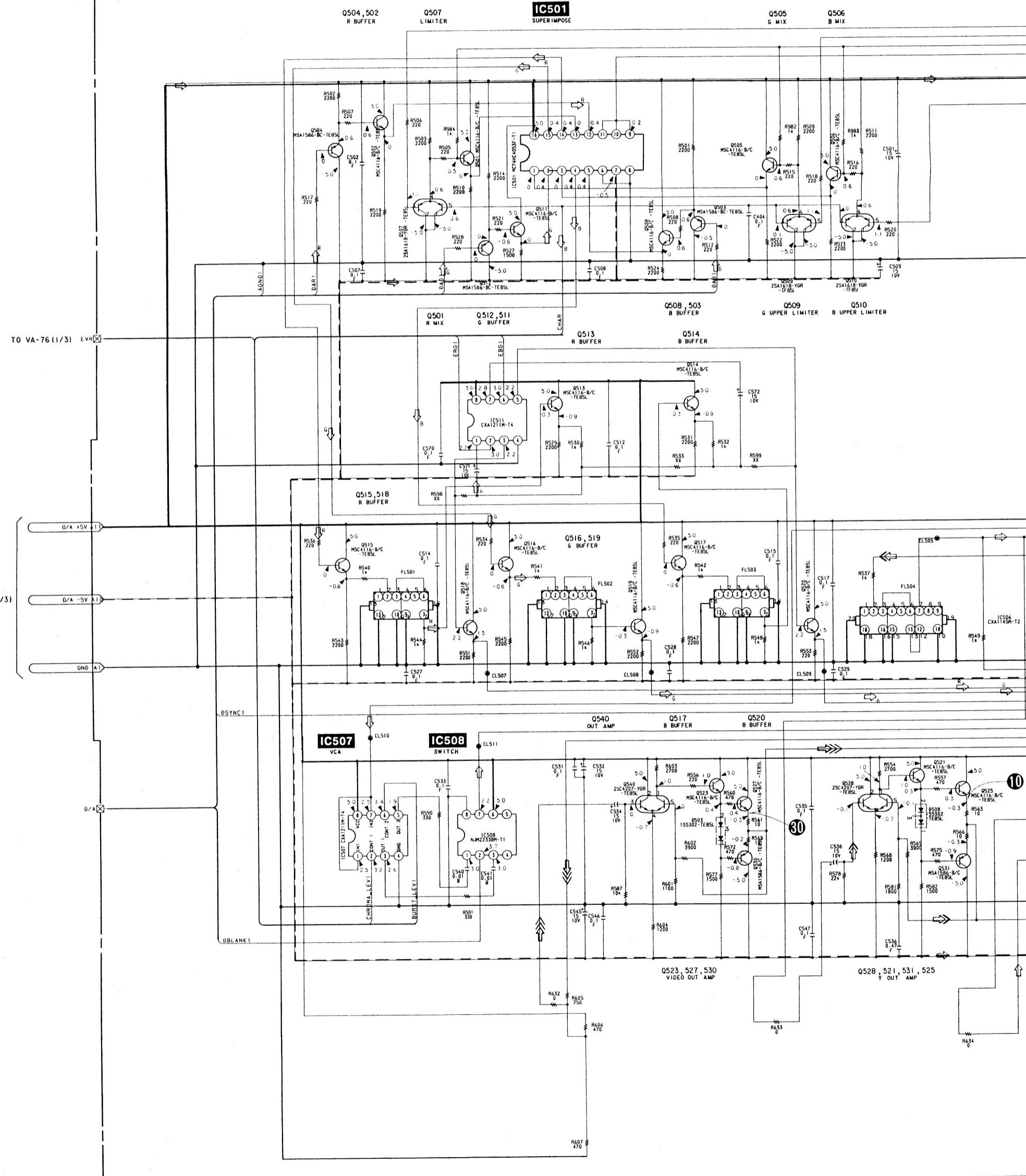
8

1

1

1

VA-76 BOARD (3/3)



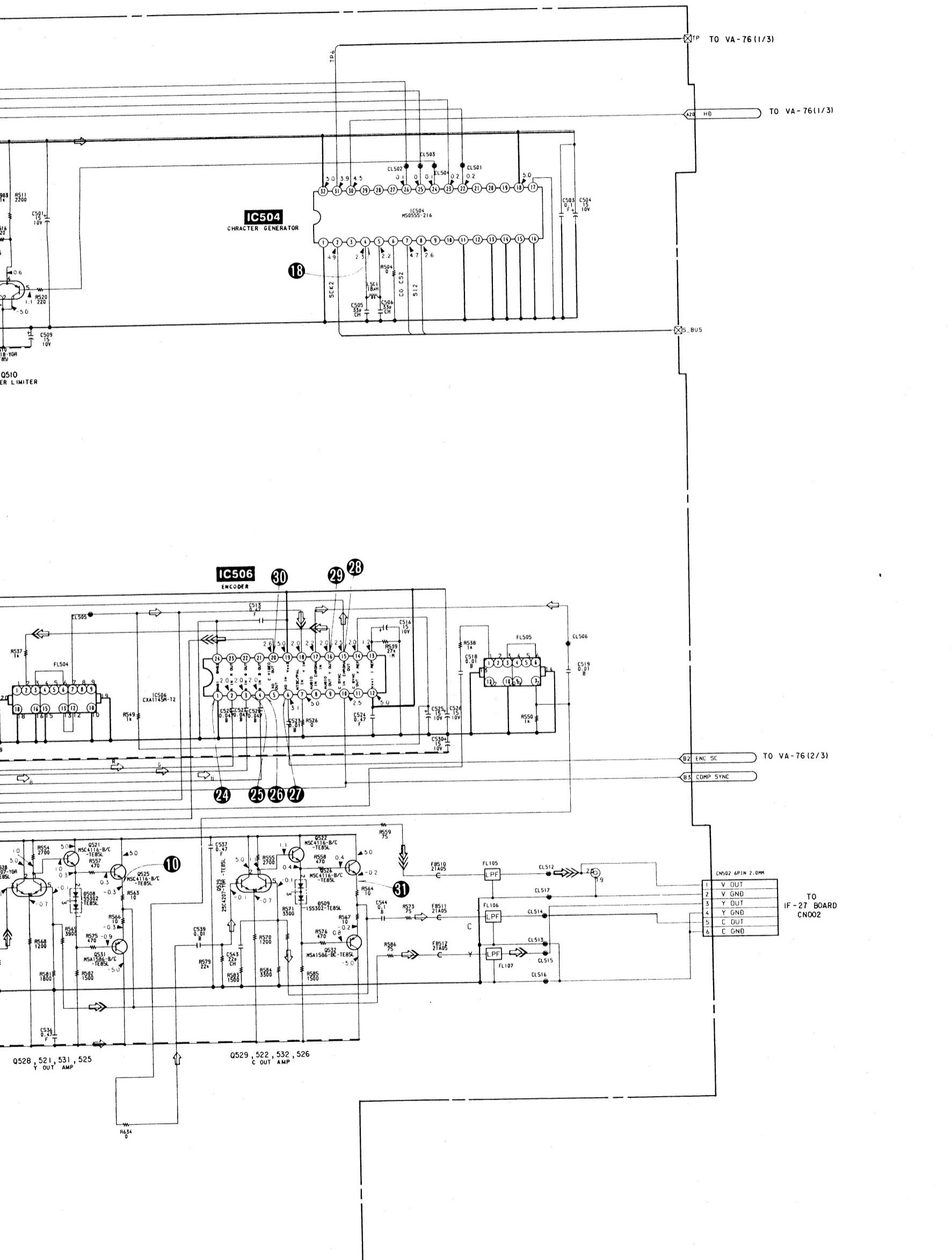
VIDEO SIGNAL			
	CHROMA	Y	Y/CHROMA
REC			
PB	⇒	⇒⇒	⇒⇒⇒

• SIGNAL PATH		
VIDEO SIGNAL	REC	P
ANALOG R		➡
ANALOG G		➡
ANALOG B		➡

SIGNAL PATH

VIDEO SIGNAL	REC	PB
ANALOG R		⇒ R
ANALOG G		⇒ G
ANALOG B		⇒ B

10 11 12 13 14 15 16 17 18 19



7 | 18 | 19 |

VA-76 (1/3)

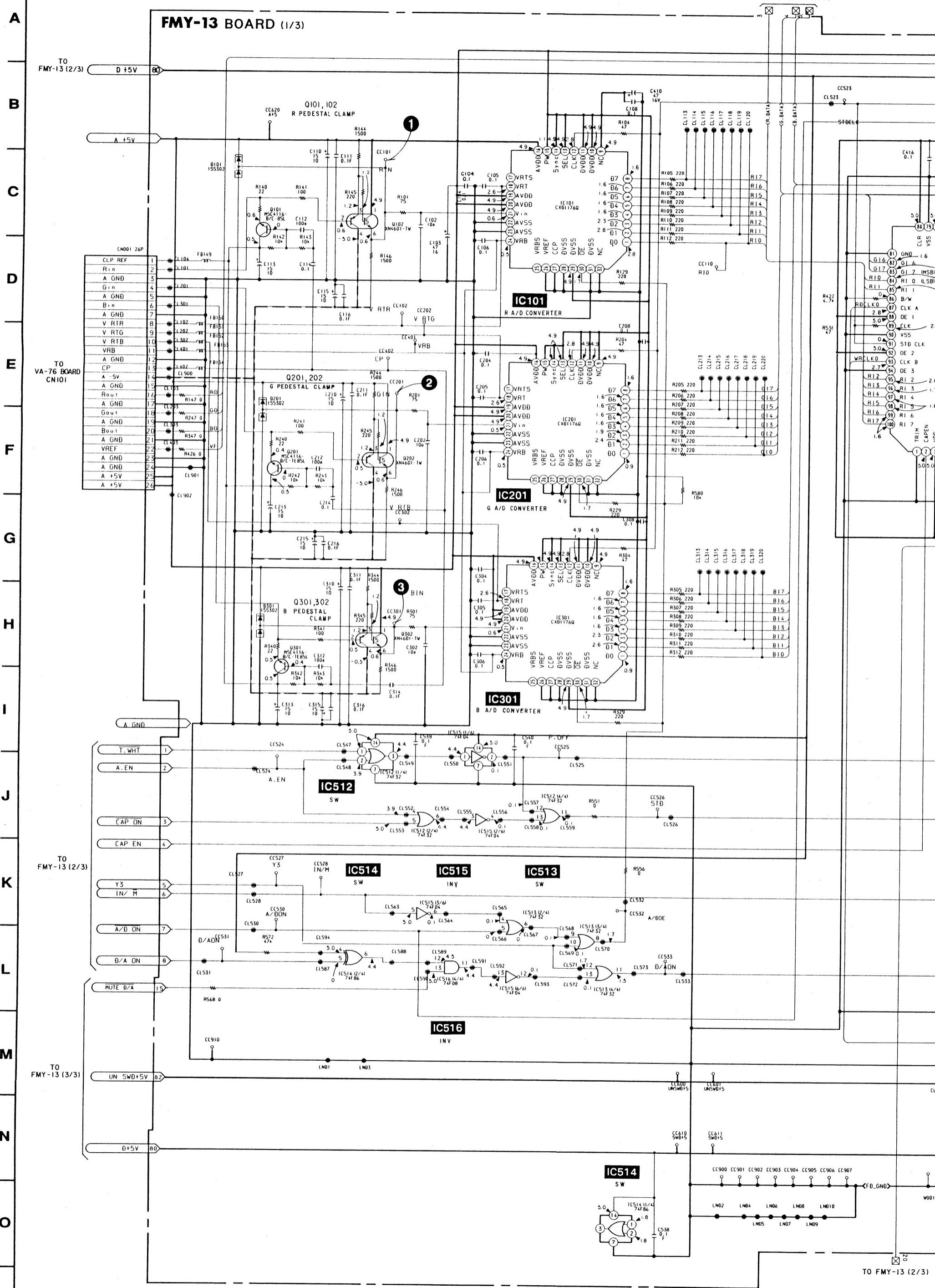
TO VA-76 (1/3)

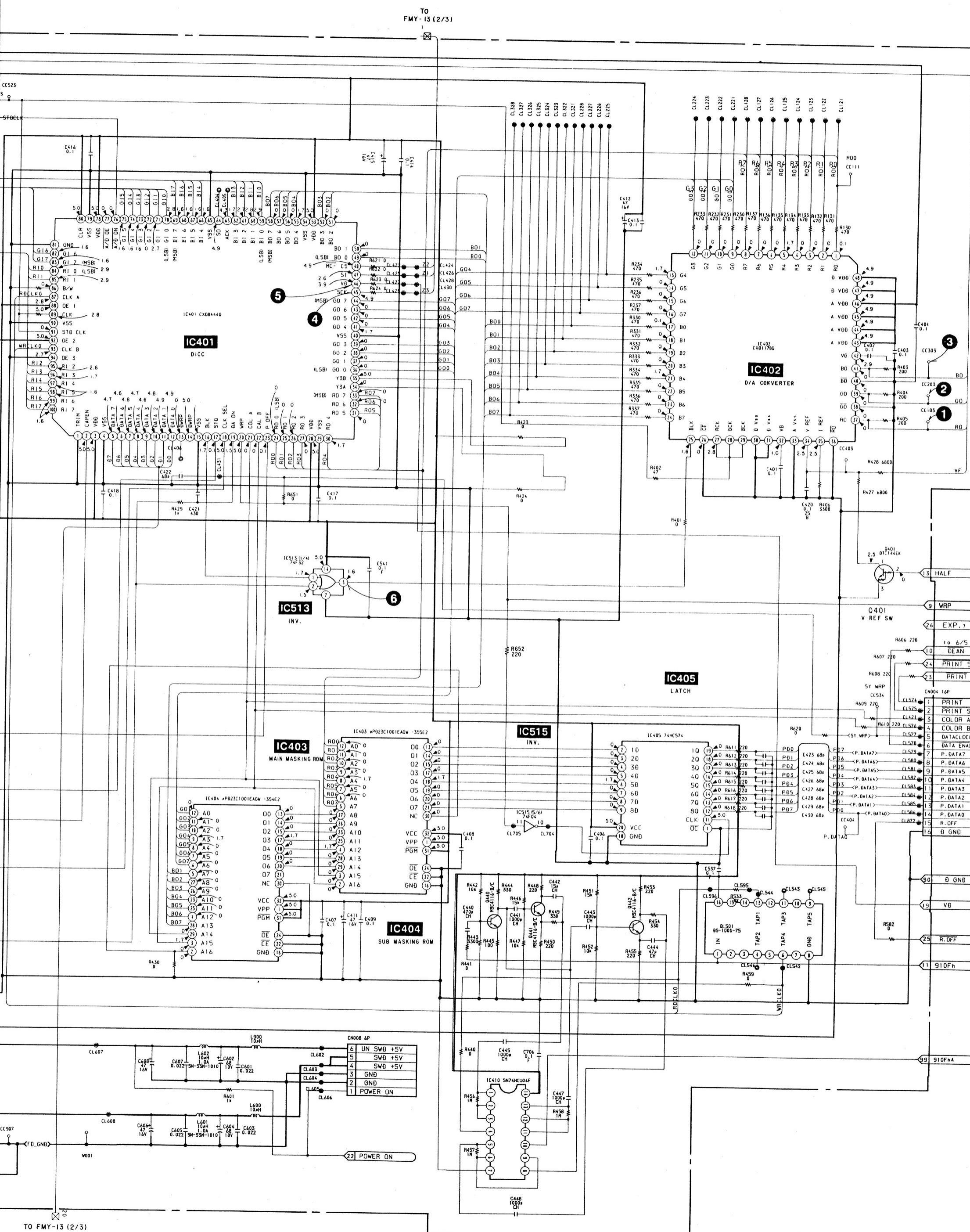
TO VA-76 (2/3)

IC

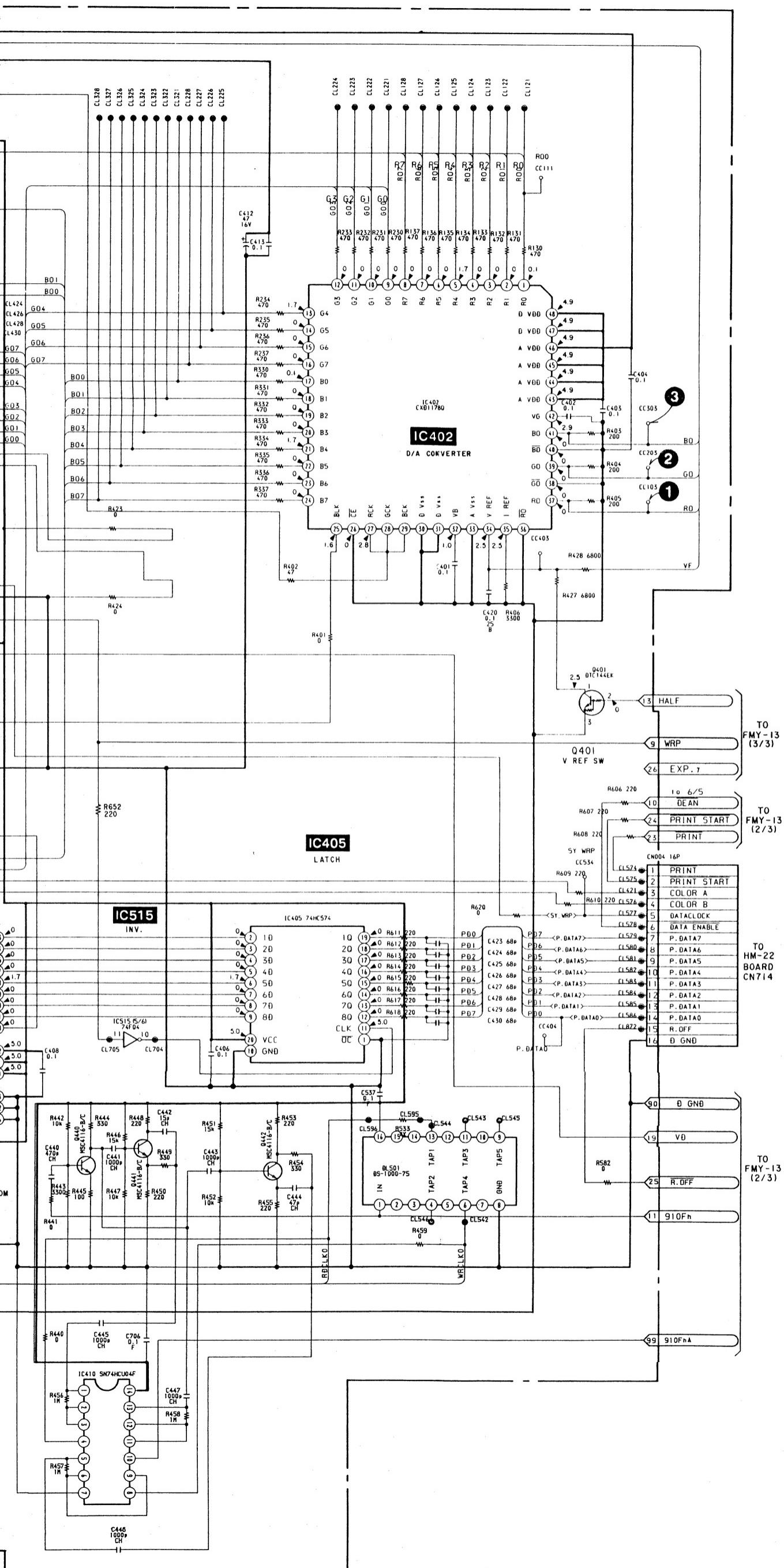
02 6PIN 2.0MM
DUT
GND
DUT
GND
DUT
GND

TO
IF-27 BOARD
CN002





2 / 3



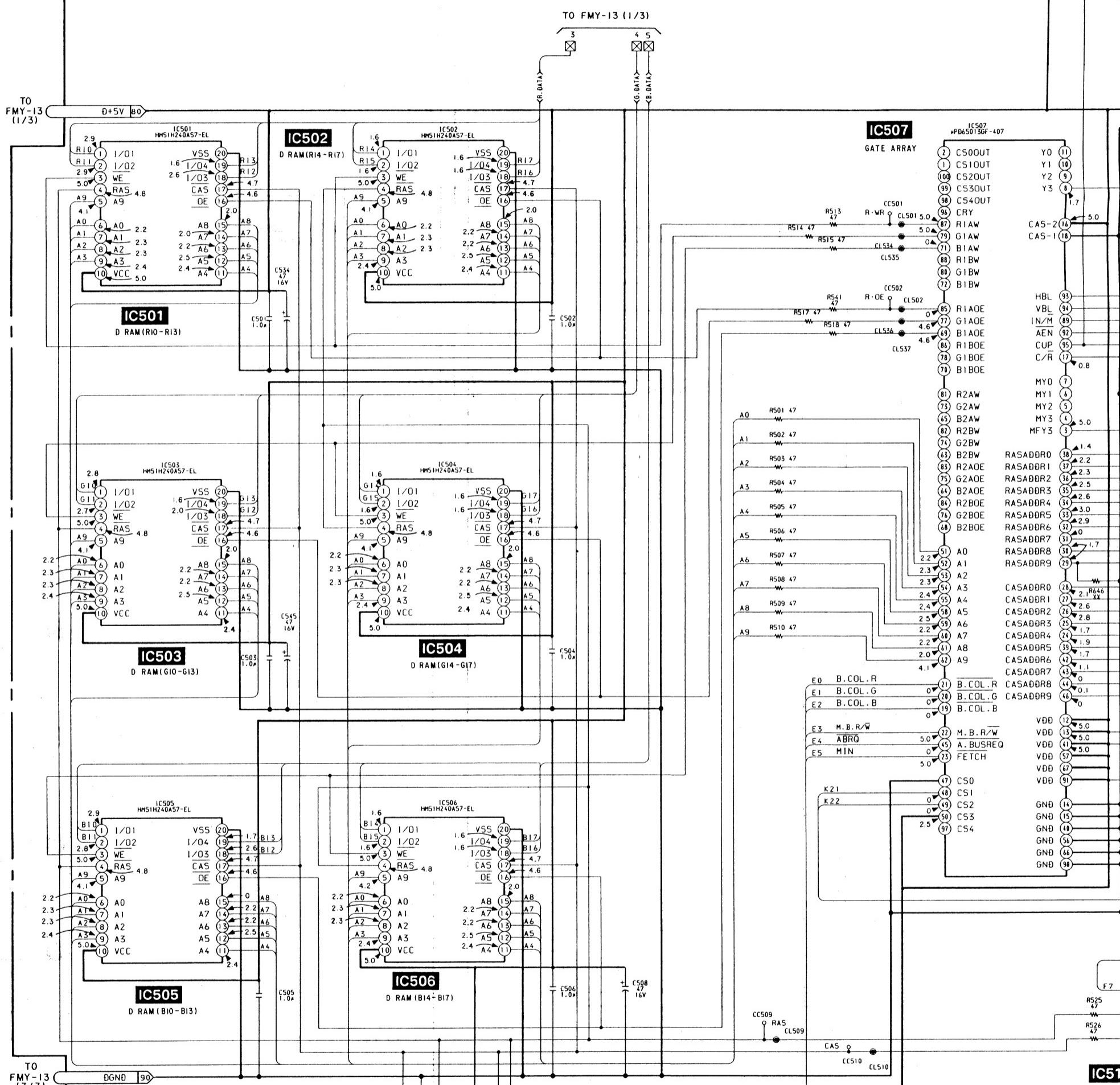
A

FMY-13 BOARD (2/3)

B

C

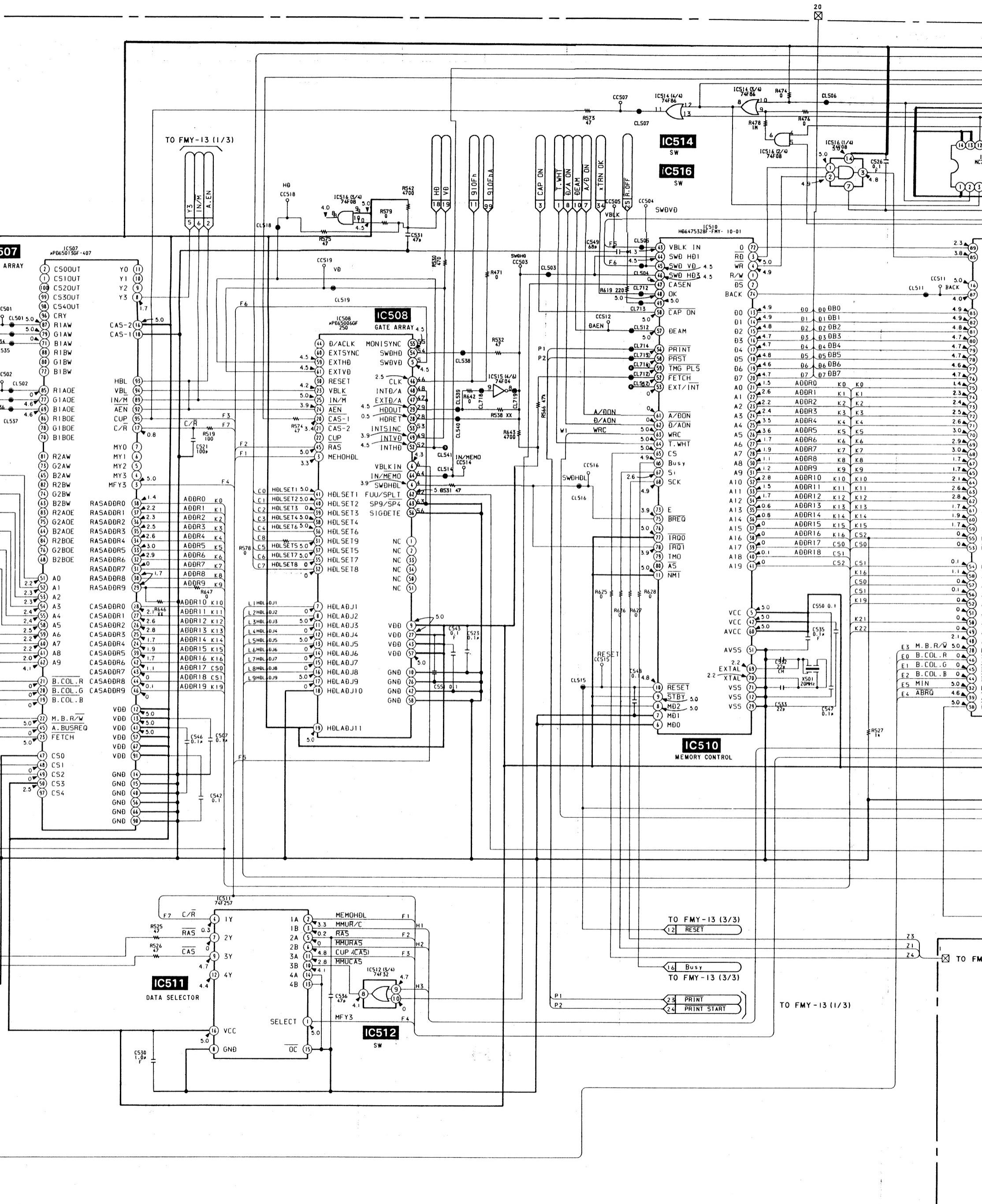
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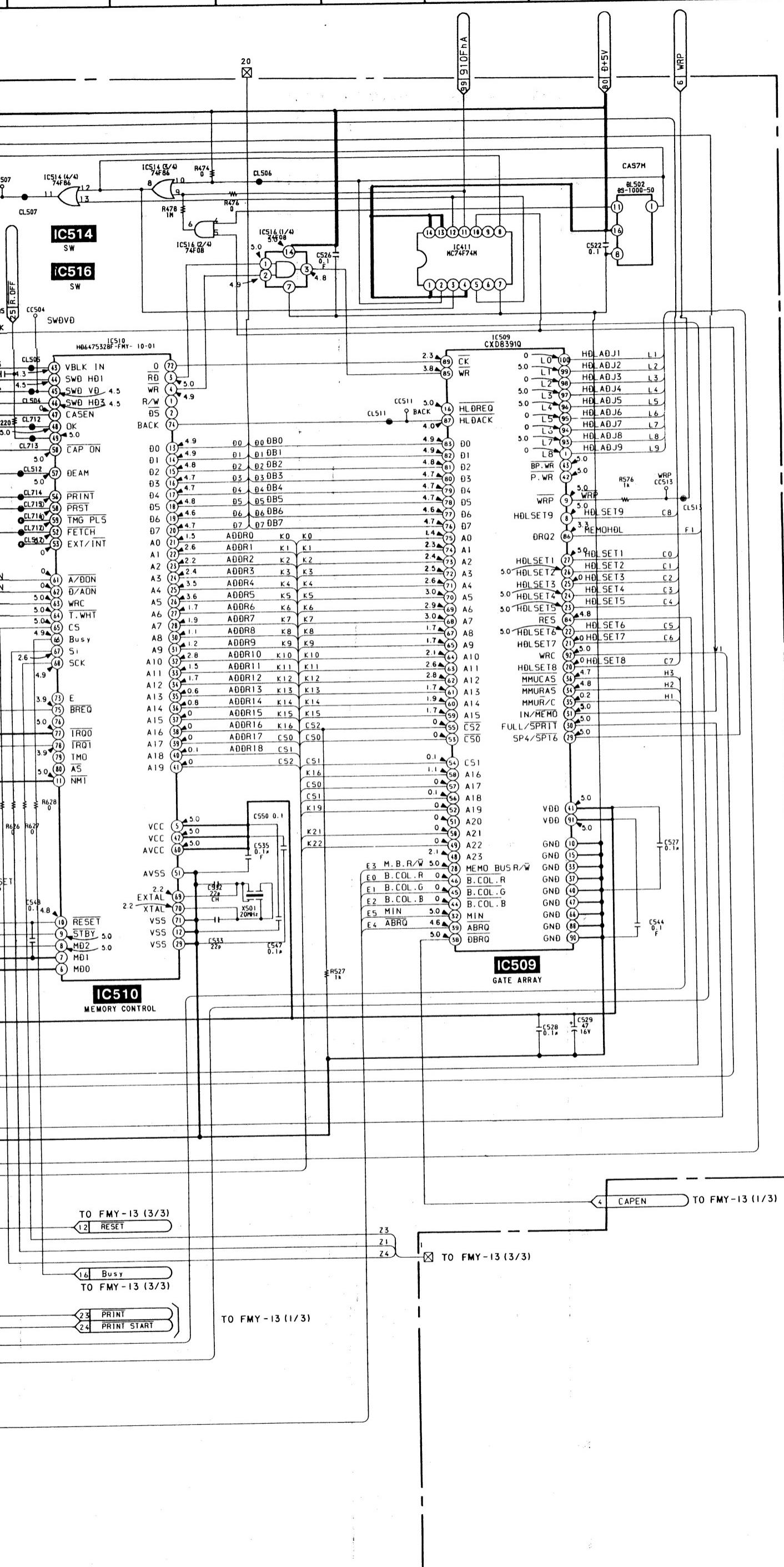
M

N

O

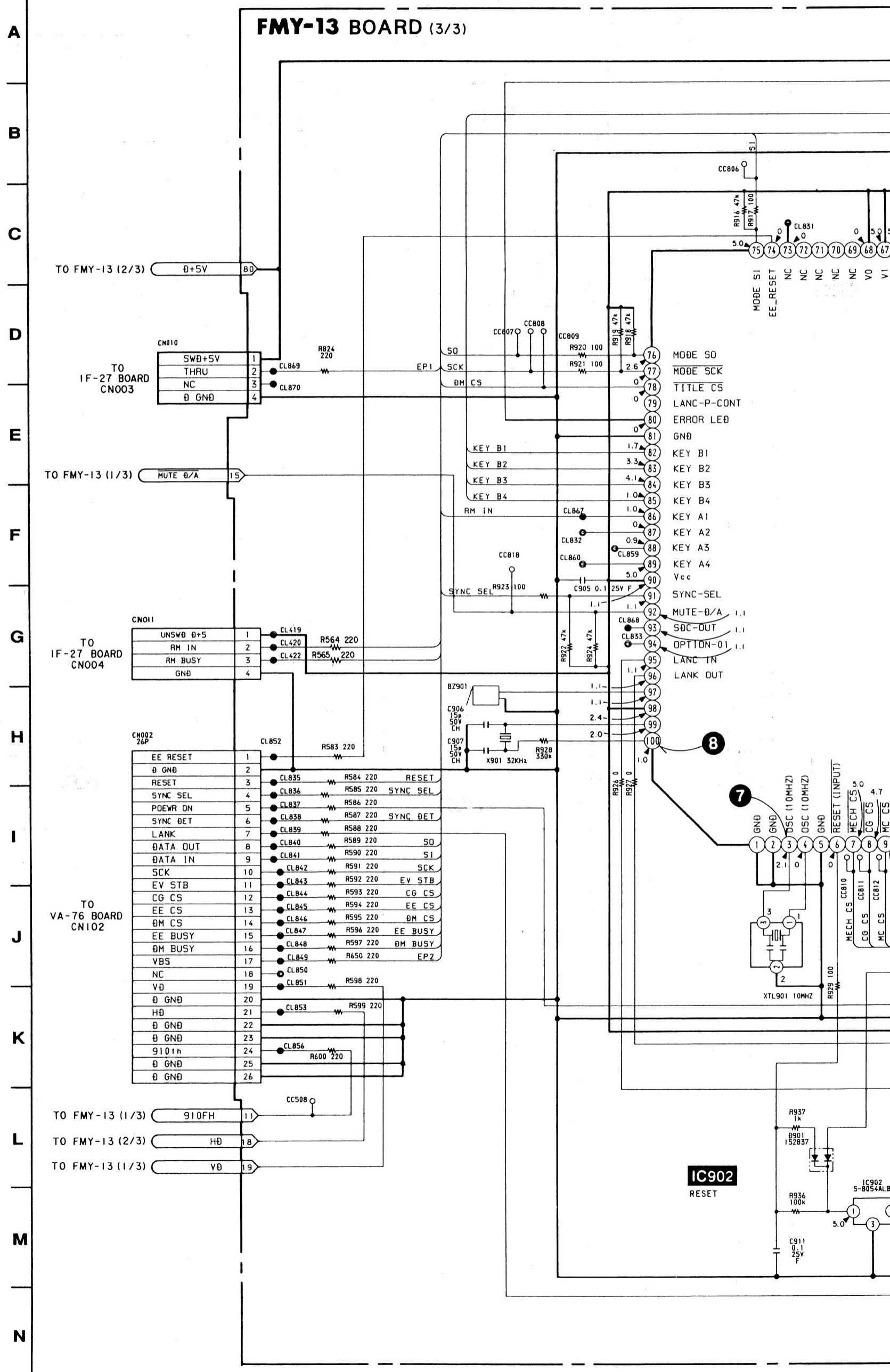


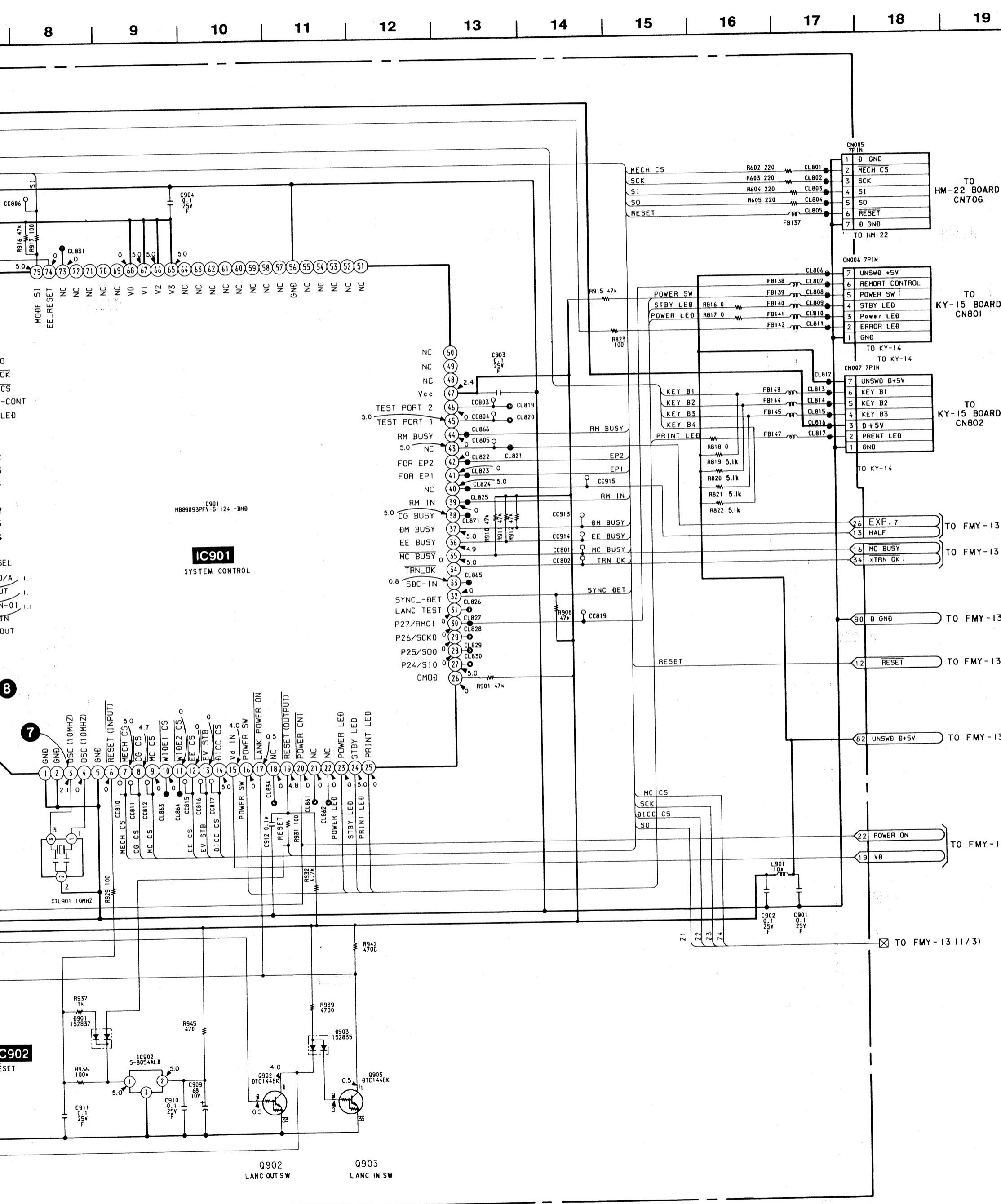
17 18 19 20 21 22 23 24



FMY-13 — 3/3 — (FRAME MEMORY)

1 | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9**





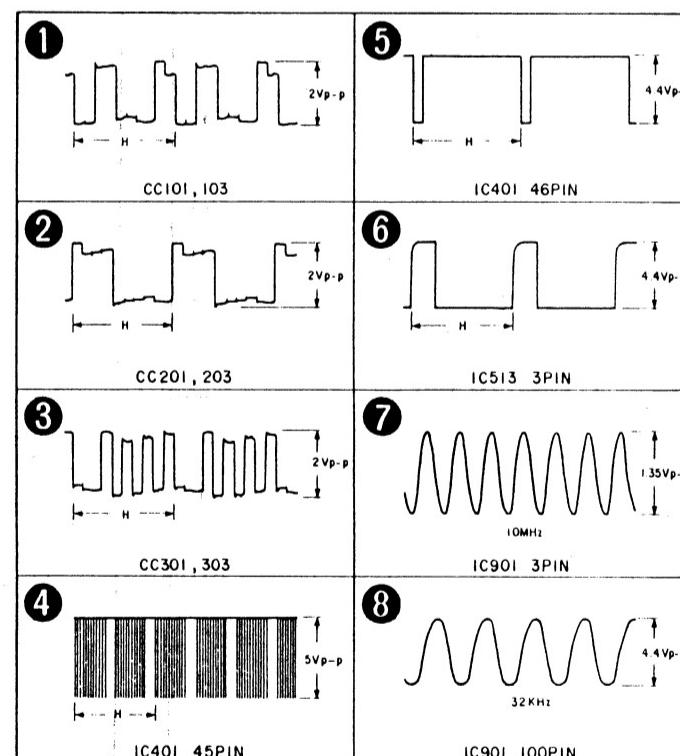
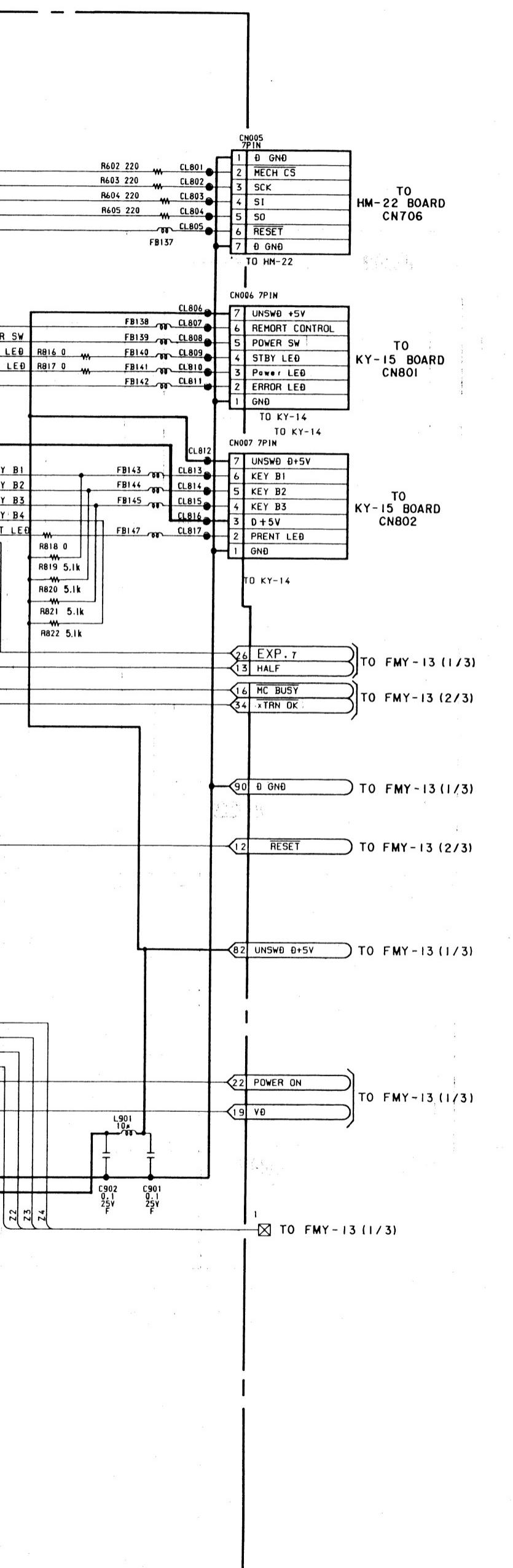
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17

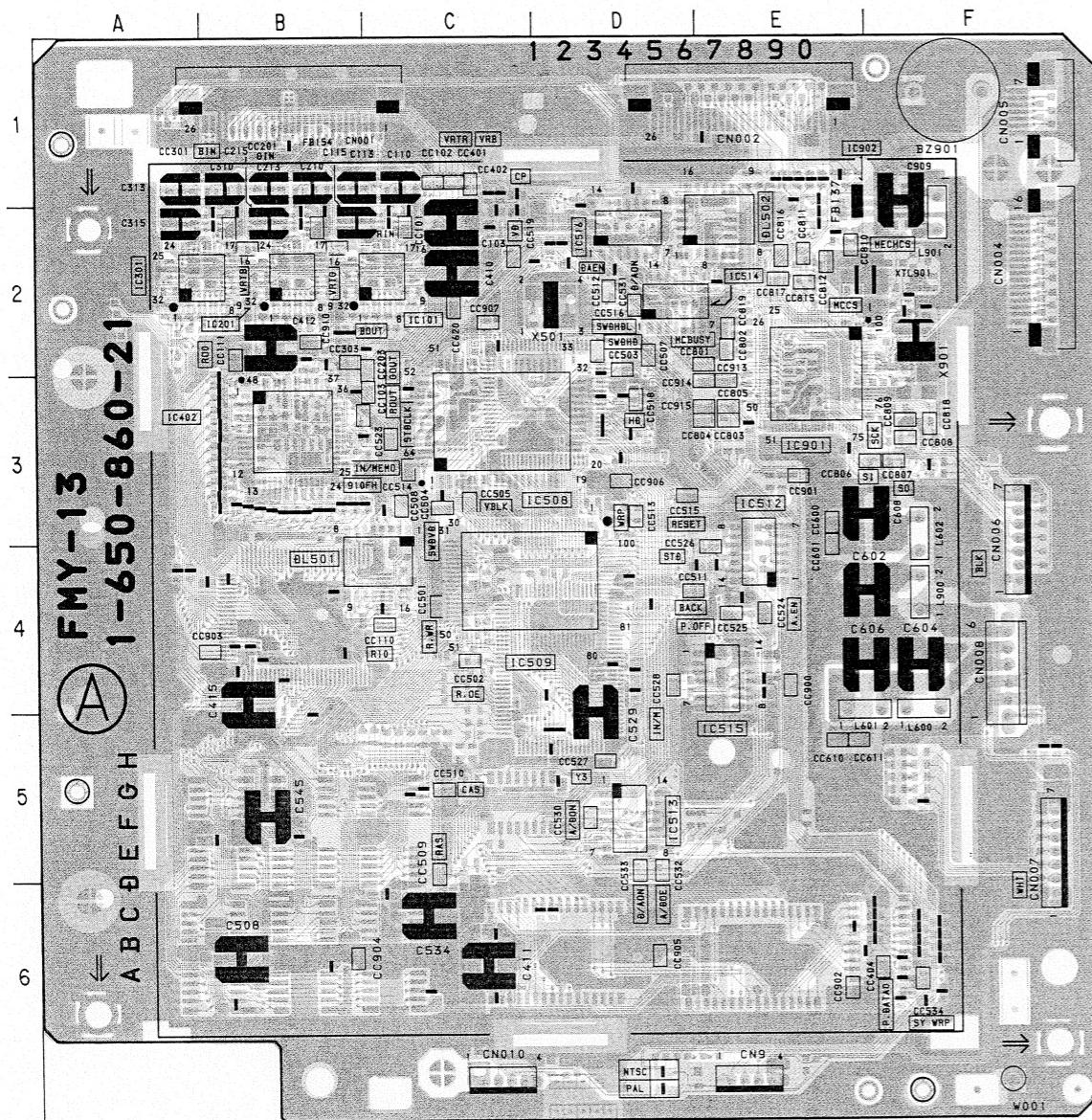
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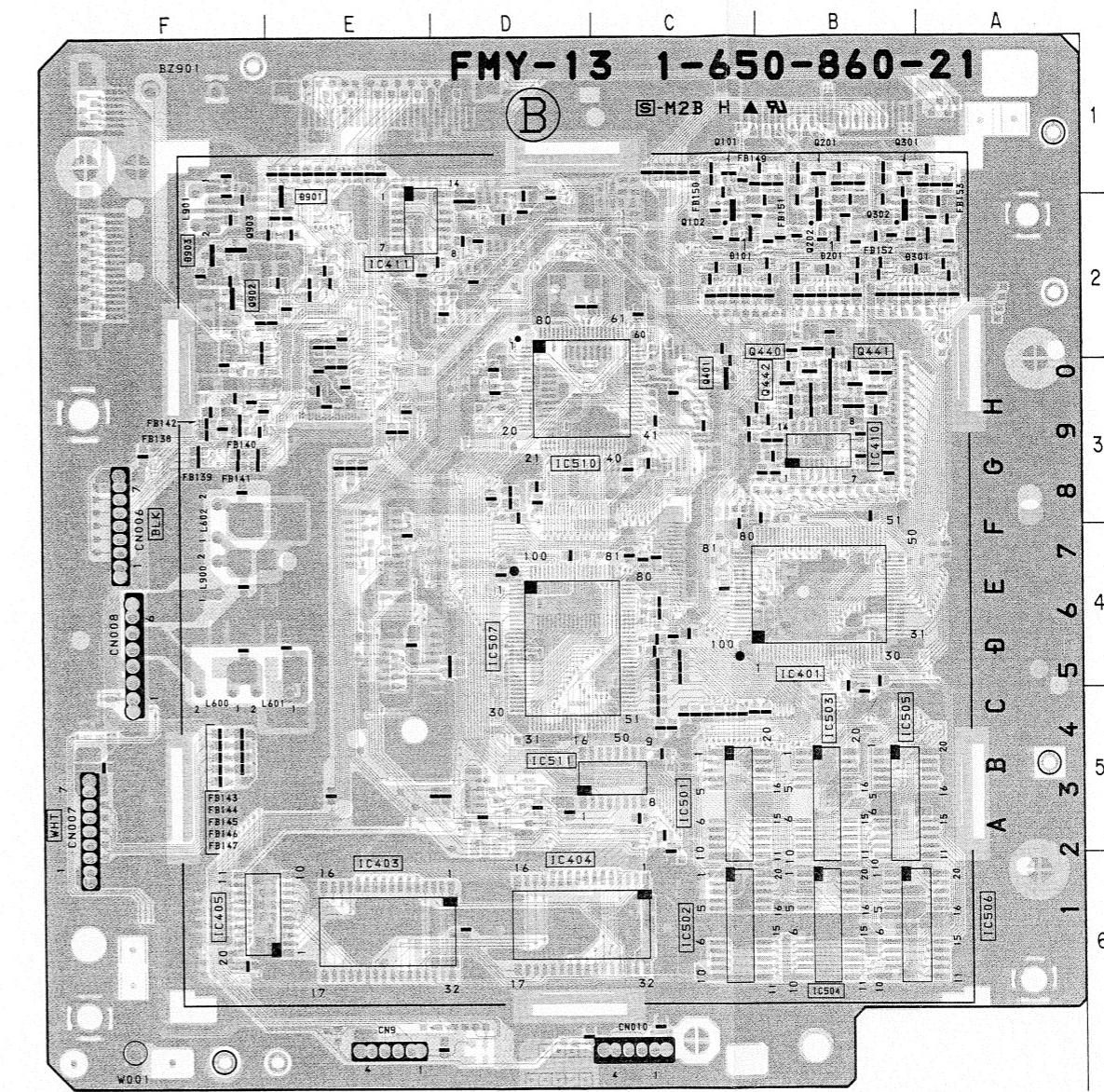
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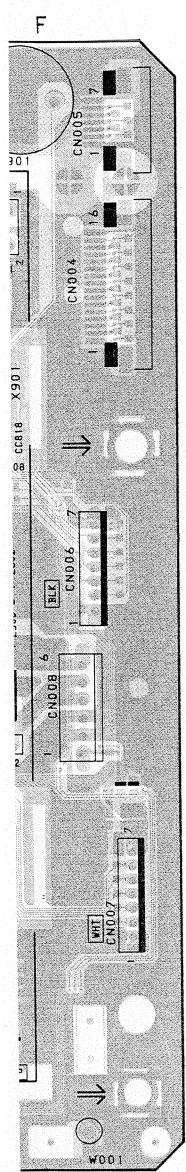
FMY-13 (FRAME MEMORY)



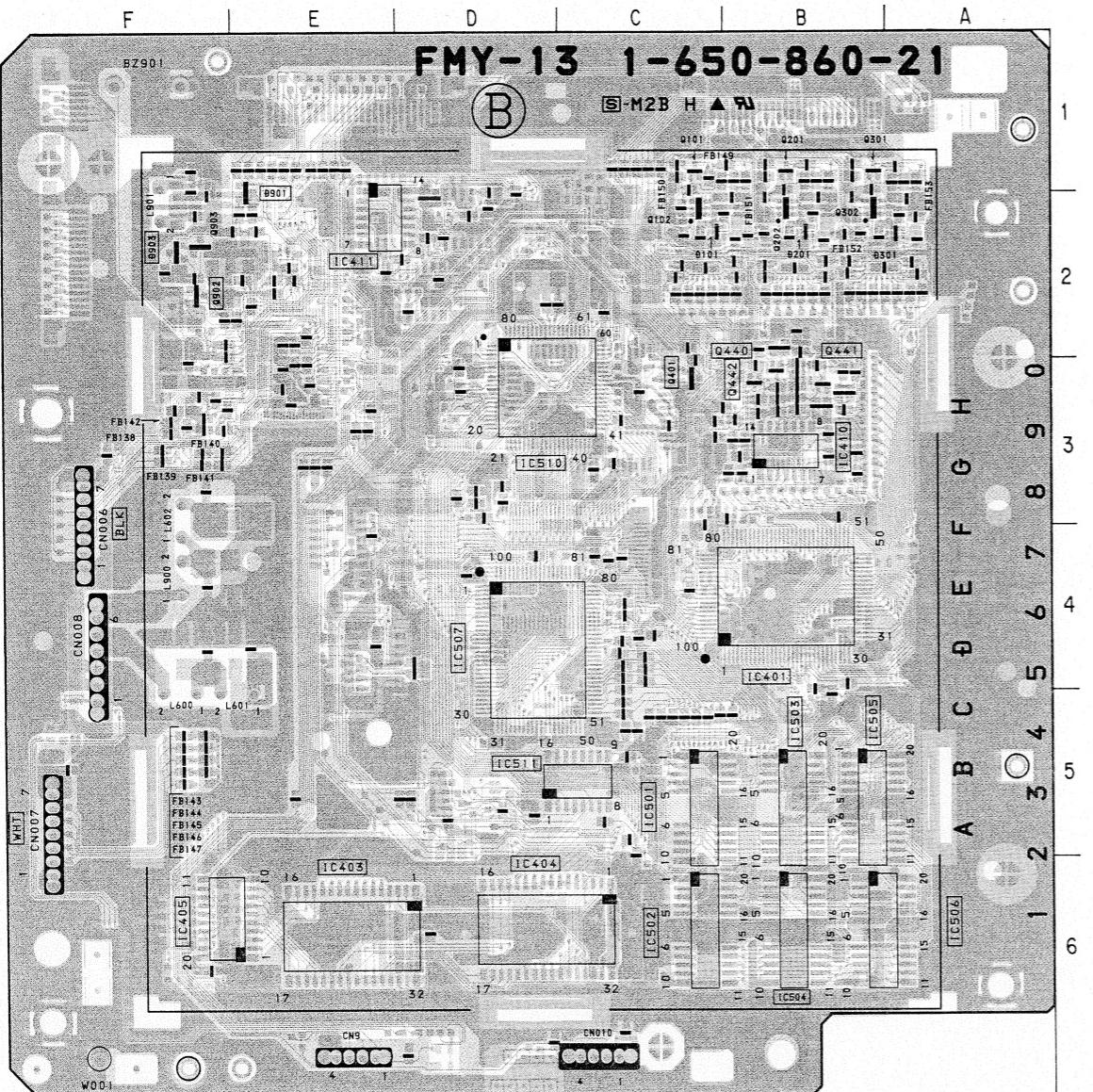
FMY-13 -COMPONENT S
1-650-860-21



FMY-13 - SOLDERING SIDE
1-650-860-21



3 -COMPONENT SIDE-
21



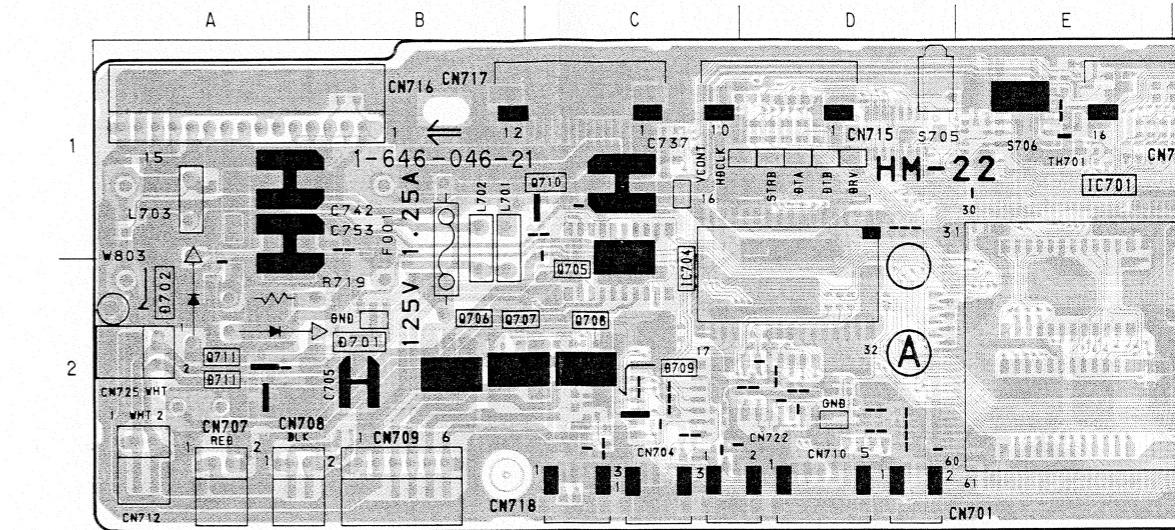
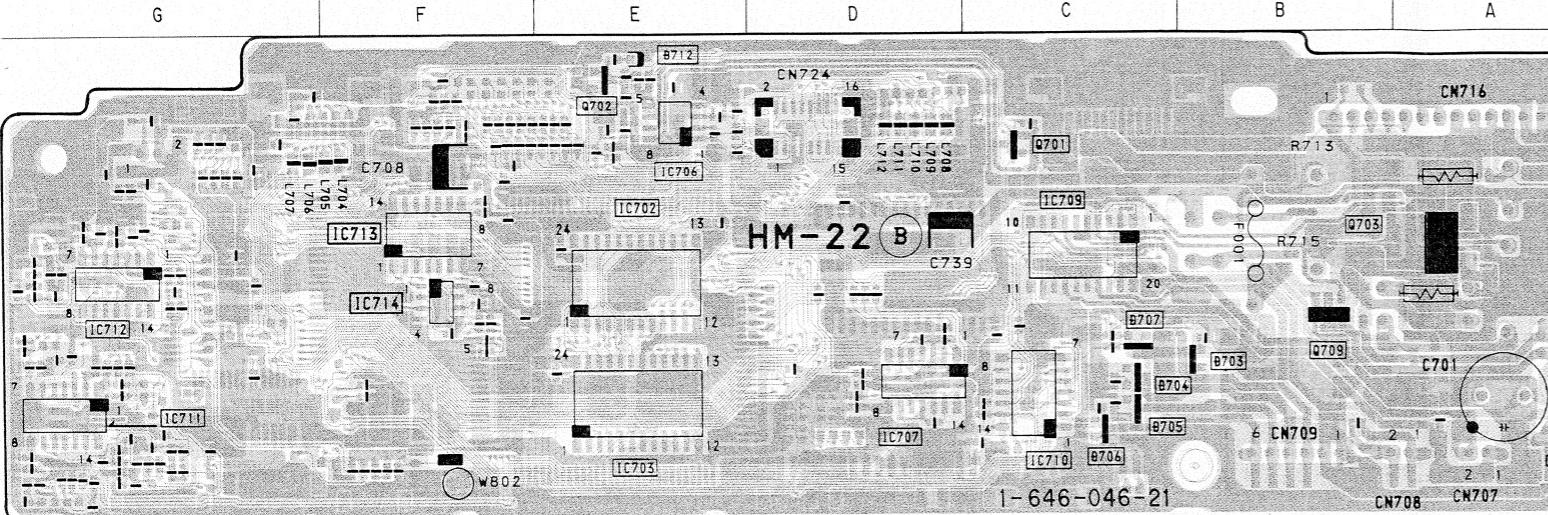
FMY-13 -SOLDERING SIDE-
1-650-860-21

FMY-13 BOARD

BZ901	F-1
CN001	B-1
CN002	E-1
CN004	F-2
CN005	F-1
CN006	F-3
CN007	F-5
CN008	F-4
CN009	E-6
CN010	C-6
D101	C-2
D201	B-2
D301	E-1
D901	F-2
D903	F-2
DL501	B-4
DL502	E-2
FL001	D-1
FL002	D-1
FL003	D-1
IC501	C-5
IC502	C-6
IC503	B-5
IC504	B-6
IC505	B-5
IC506	A-6
IC507	D-4
IC508	C-3
IC509	C-4
IC510	D-3
IC511	D-5
IC512	E-3
IC513	D-5
IC514	E-2
IC515	E-4
IC516	D-1
IC901	E-3
IC902	F-1
L600	F-5
L601	F-5
L602	F-3
L900	F-4
L901	F-2
Q101	C-1 S
Q102	C-2 S
Q201	B-1 S
Q202	B-2 S
Q301	B-1 S
Q302	B-2 S
Q401	C-3 S
Q801	C-3 S
Q902	F-2 S
X501	D-2
X901	F-2
XTL901	F-2

S:SOLDERING SIDE

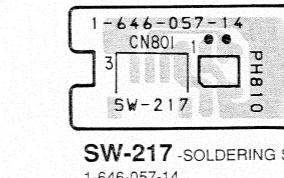
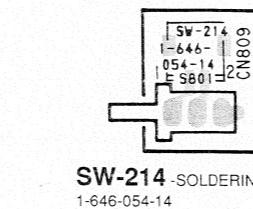
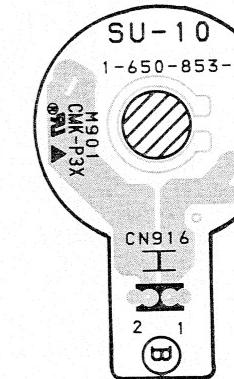
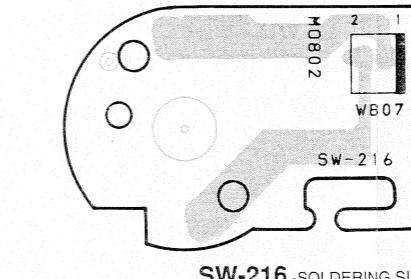
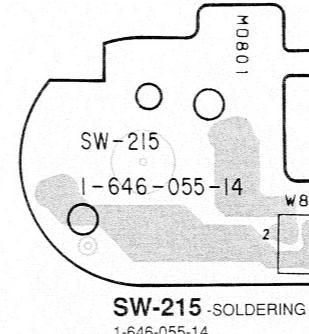
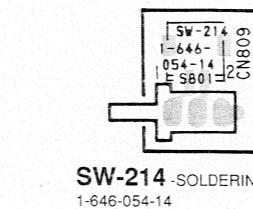
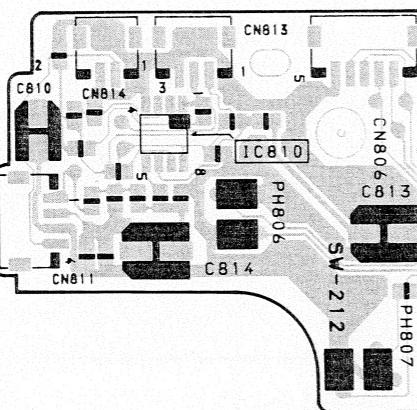
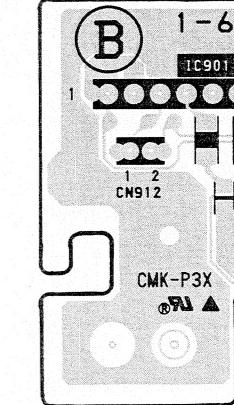
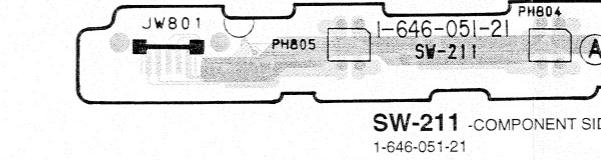
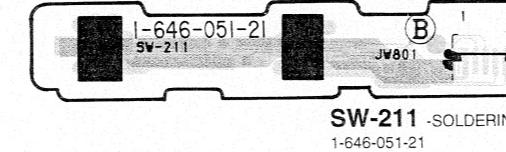
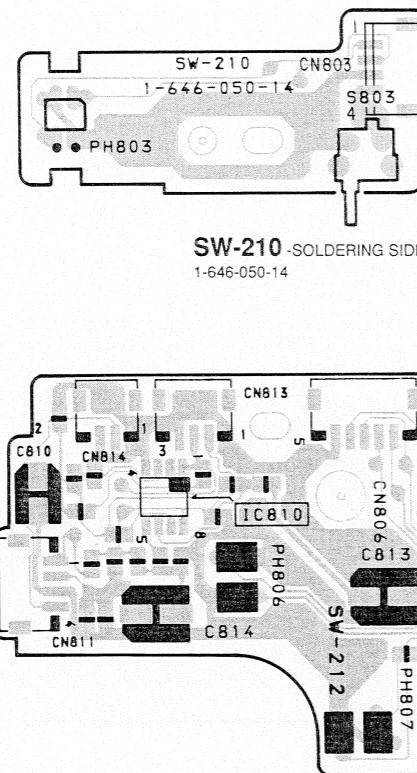
HM-22 (THERMAL HEAD CONTROL) DUS-12 (PAPER EJECT MOTOR CONTROL) SU-10 (EJECT MOTOR) SW-39 (PAPER TRAY SENSOR) SW-41 (PAPER OUT SENSOR) SW-42 (PAPER CHECK SENSC
SW-211 (RIBBON MARK SENSOR) SW-212 (HEAD POSITION SENSOR) SW-213 (PAPER ROLLER POSITION SENSOR) SW-214 (RIBBON CASSETTE SWITCH) SW-215 (HEAD MOTOR) SW-216 (RIBBON



HM-22 BOARD

CN701	D-2	IC706	E-1	S
CN702	F-2	IC707	D-2	S
CN703	G-1	IC708	G-2	
CN704	C-2	IC709	C-2	S
CN705	G-2	IC710	D-2	S
CN706	G-1	IC711	G-2	S
CN707	A-2	IC712	G-2	S
CN708	A-2	IC713	F-1	S
CN709	B-2	IC714	F-2	S
CN710	D-2	L701	B-1	
CN711	G-2	L702	B-1	
CN712	A-2	L703	A-1	
CN713	G-2	L704	F-1	S
CN714	F-1	L705	F-1	S
CN715	D-1	L706	G-1	S
CN716	A-1	L707	G-1	S
CN717	C-1	L708	D-1	S
CN718	C-2	L709	D-1	S
CN719	G-1	L710	D-1	S
CN721	C-2	L711	D-1	S
CN722	G-2	L712	D-1	S
CN724	D-1	S		
CN725	A-2	Q701	C-1	S
D701	A-2	Q702	E-1	S
D702	A-2	Q703	B-1	S
D703	B-2	Q705	C-2	
D704	C-2	Q706	B-2	
D705	C-2	Q707	B-2	
D706	C-2	Q708	C-2	
D707	C-2	Q709	B-2	S
D708	C-2	Q710	C-1	
D709	C-2	Q711	A-2	
D711	A-2			
D712	E-1	S		
F001	B-1	S		
IC701	E-2			
IC702	E-2	S	X701	F-2
IC703	E-2	S	X702	F-2
IC704	D-2		X703	F-2

S:SOLDERING SIDE



HEAD CONTROL, SENSOR

HEAD CONTROL, SENSOR

HEAD CONTROL, SEL

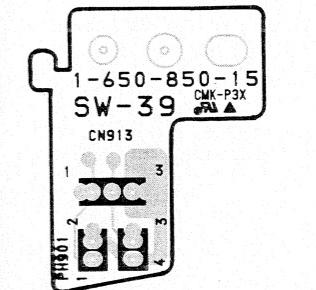
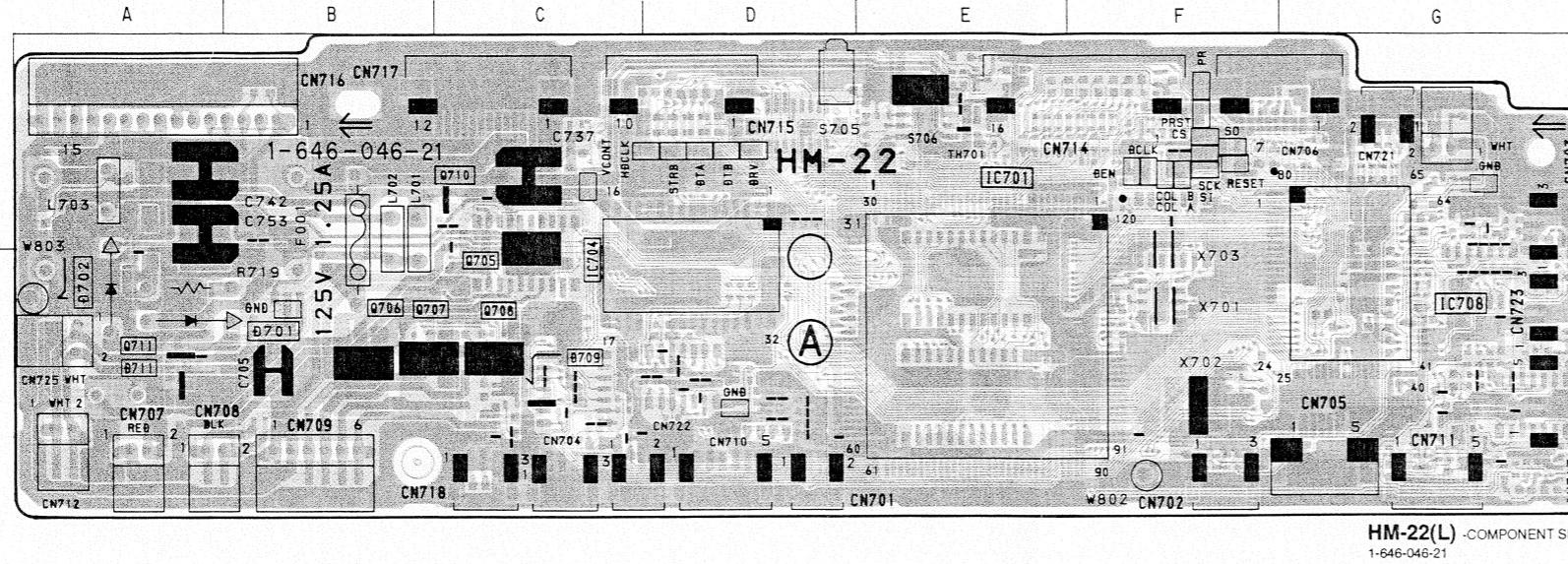
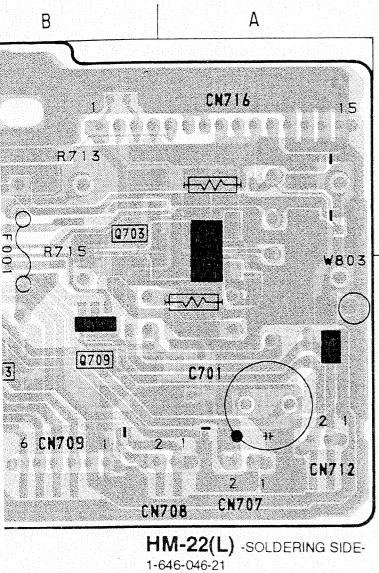
HM-22

HM-

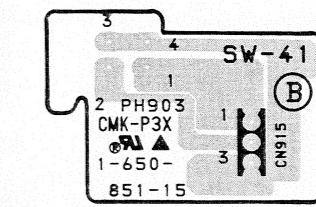
HEAD CONTROL, SENSOR

HM-22

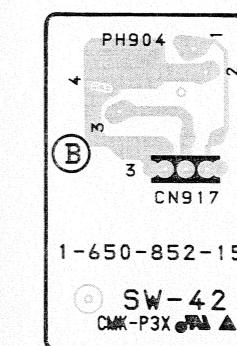
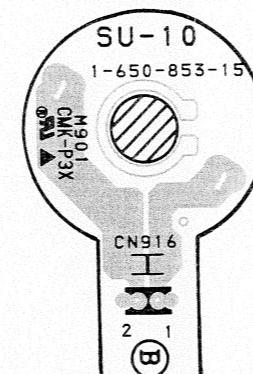
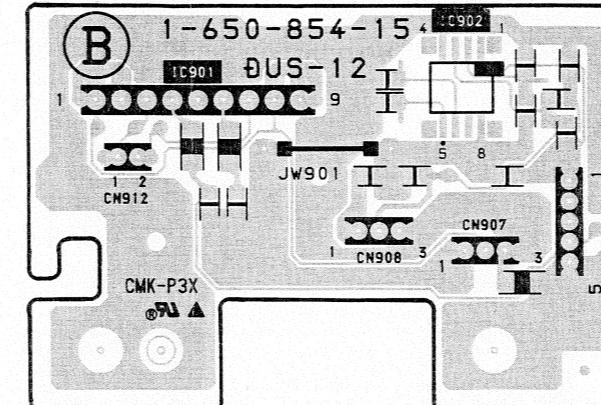
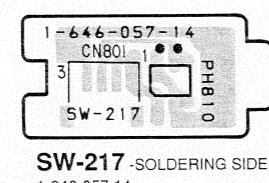
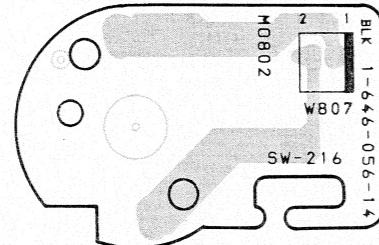
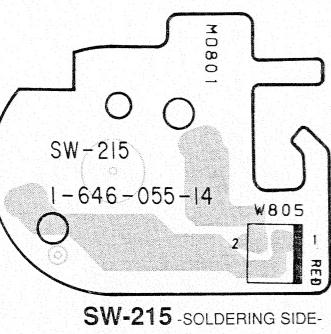
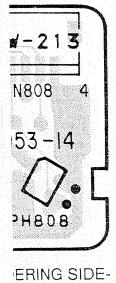
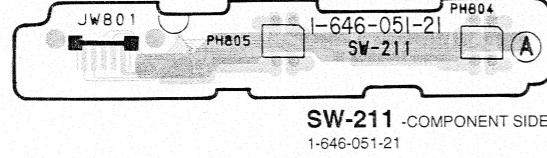
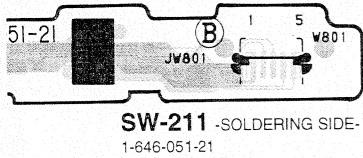
(EJECT MOTOR) SW-39 (PAPER TRAY SENSOR) SW-41 (PAPER OUT SENSOR) SW-42 (PAPER CHECK SENSOR) SW-208 (PAPER EDGE SENSOR) SW-210 (RIBBON CODE SENSOR)
 ROLLER POSITION SENSOR) SW-214 (RIBBON CASSETTE SWITCH) SW-215 (HEAD MOTOR) SW-216 (RIBBON MOTOR) SW-217 (JAMMING DET SENSOR)



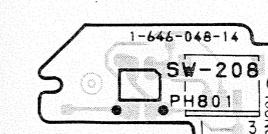
SW-39 -SOLDERING SIDE-
1-650-850-15



SW-41 -SOLDERING SIDE-
1-650-851-15



SW-42 -SOLDERING SIDE-
1-650-852-15



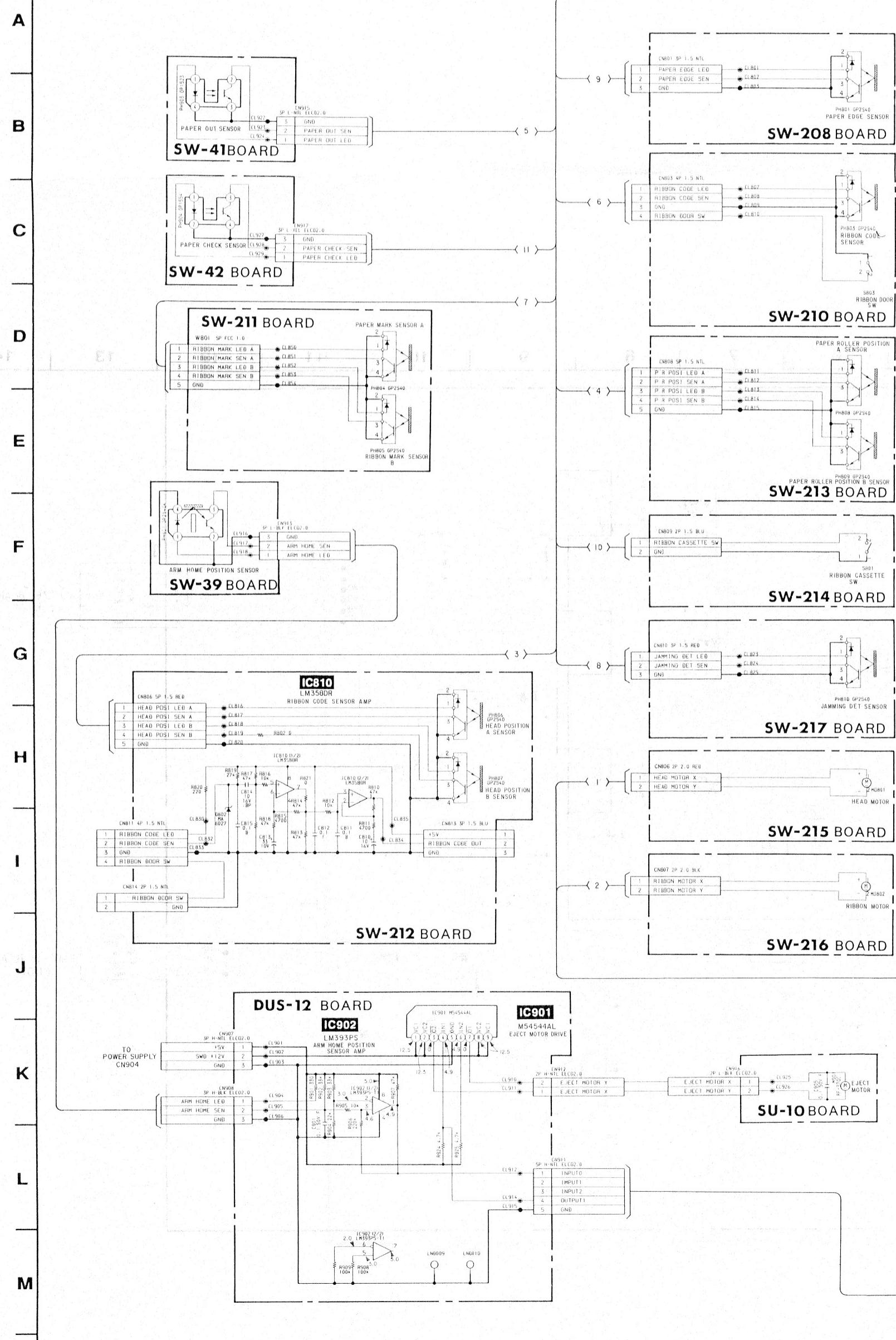
HEAD CONTROL, SENSOR
HM-22
HEAD CONTROL, SENSOR
HM-22

HM-22 (THERMAL HEAD CONTROL)
SW-212 (HEAD POSITION SENSOR)

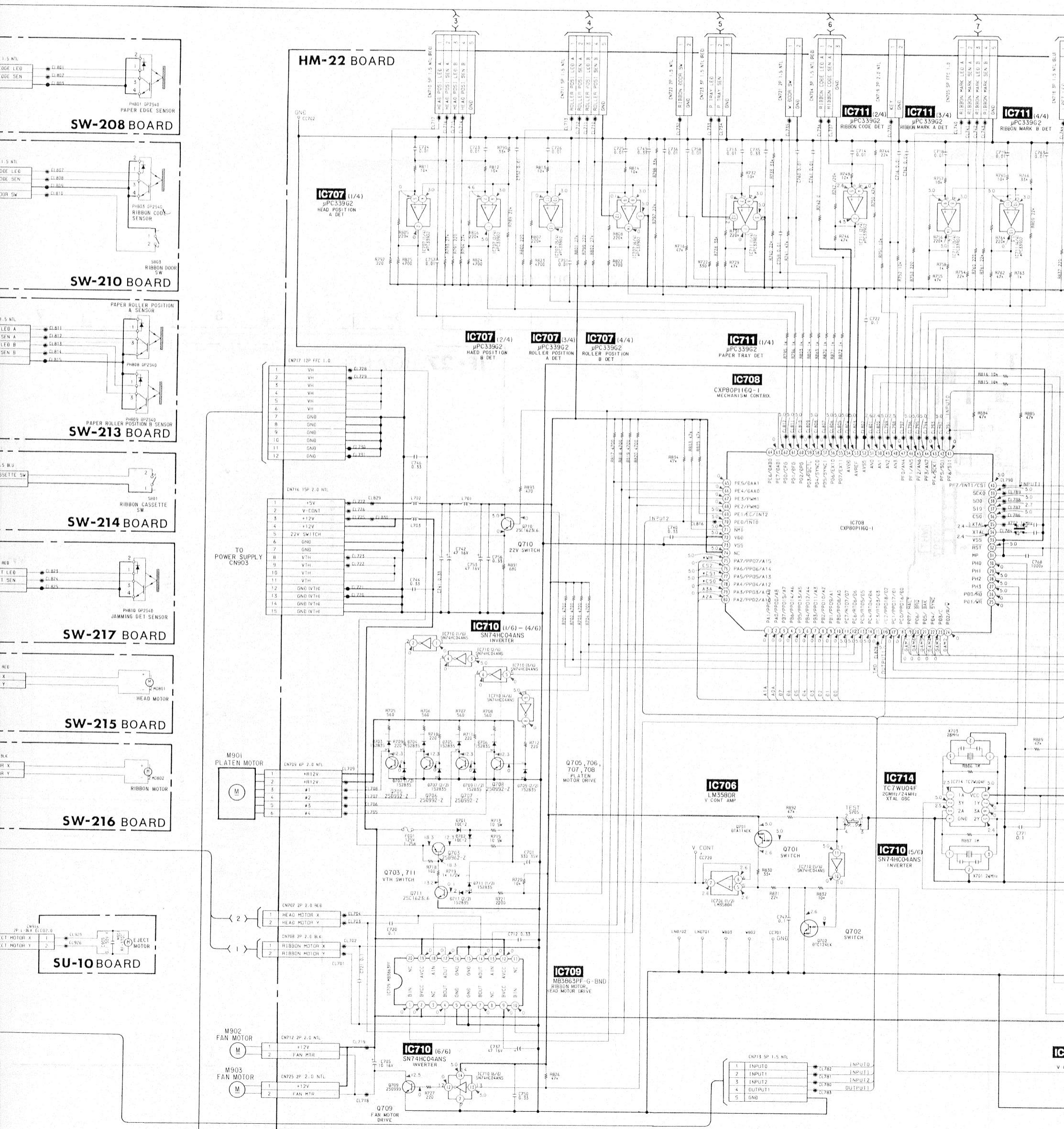
DUS-12 (PAPER EJECT MOTOR CONTROL)
SW-213 (PAPER ROLLER POSITION SENSOR)

SU-10 (EJECT MOTOR) SW-39 (PAPER
CASSSETTE SWITCH)

1 2 3 4 5 6 7 8 9

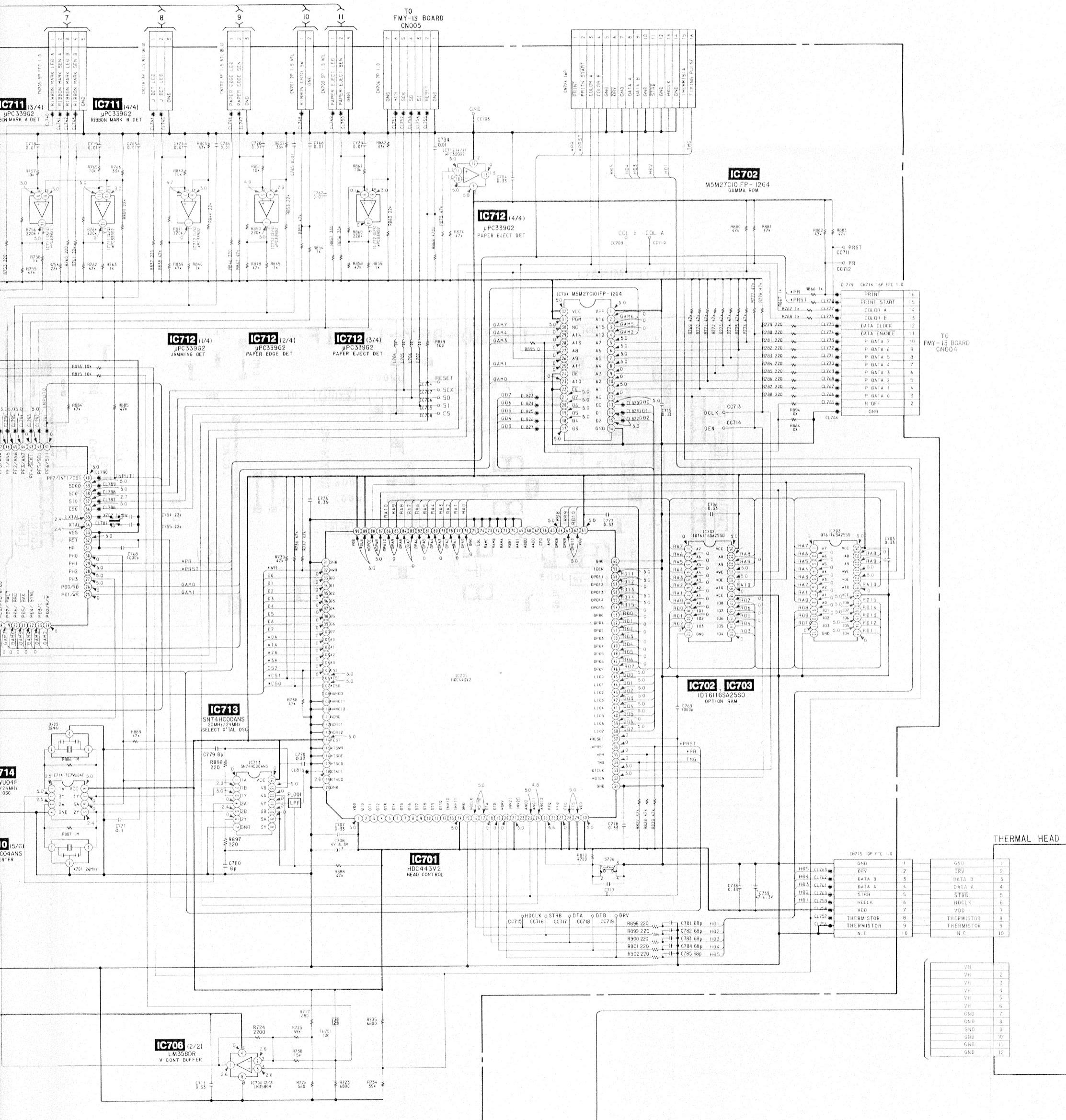


SU-10 (EJECT MOTOR) SW-39 (PAPER TRAY SENSOR) SW-41 (PAPER OUT SENSOR) SW-42 (PAPER CHECK SENSOR) SW-208 (PAPER EDGE
SW-214 (RIBBON CASSETTE SWITCH) SW-215 (HEAD MOTOR) SW-216 (RIBBON MOTOR) SW-217 (JAMMING DET SENSOR)



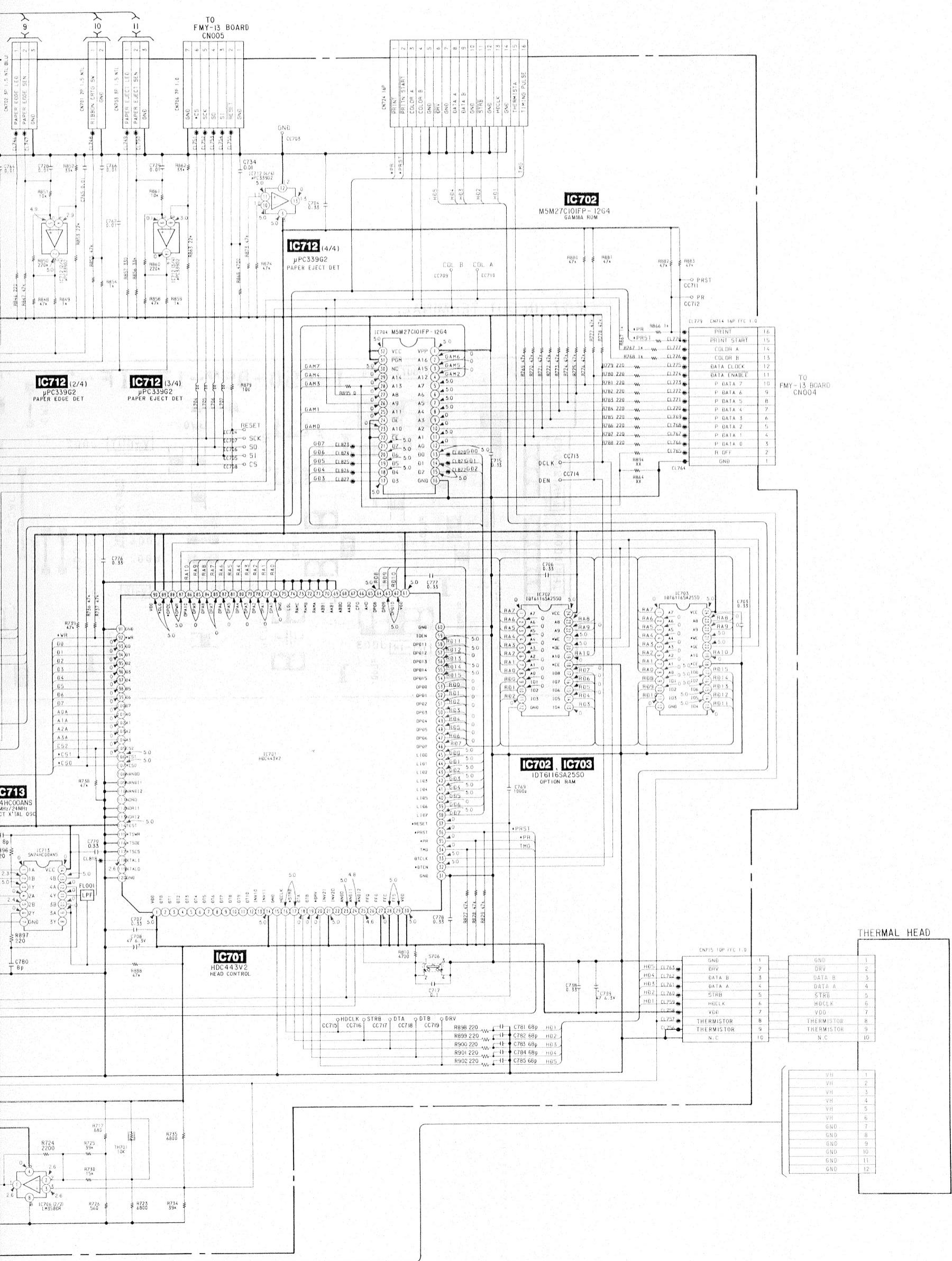
SW-208 (PAPER EDGE SENSOR) SW-210 (RIBBON CODE SENSOR) SW-211 (RIBBON MARK SENSOR)

17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28

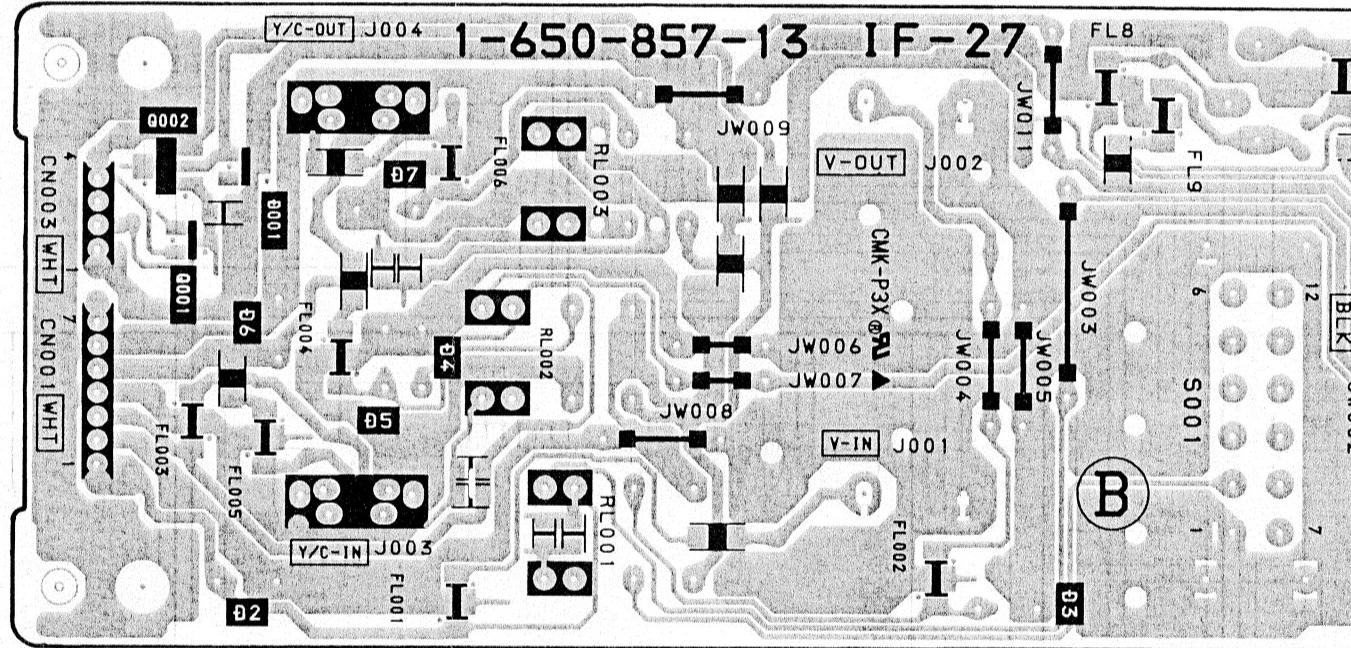


) SW-210 (RIBBON CODE SENSOR) SW-211 (RIBBON MARK SENSOR)

20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |

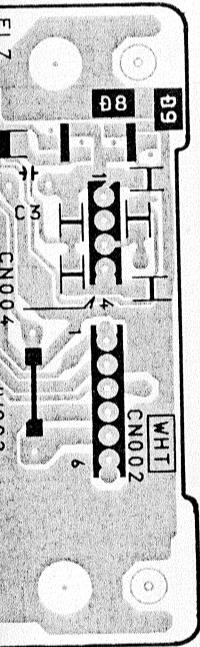


IF-27 (IN/OUT TERMINAL)

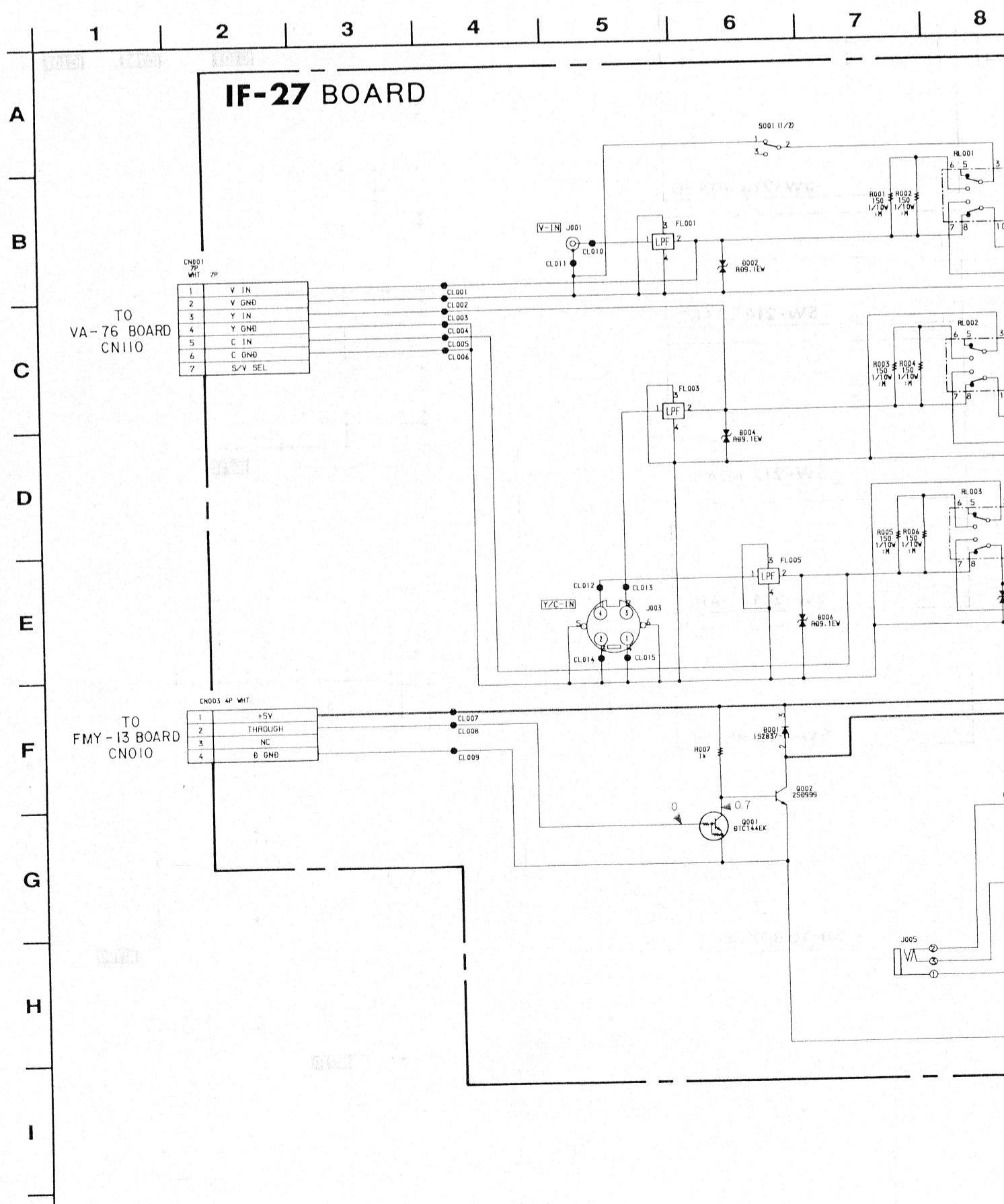


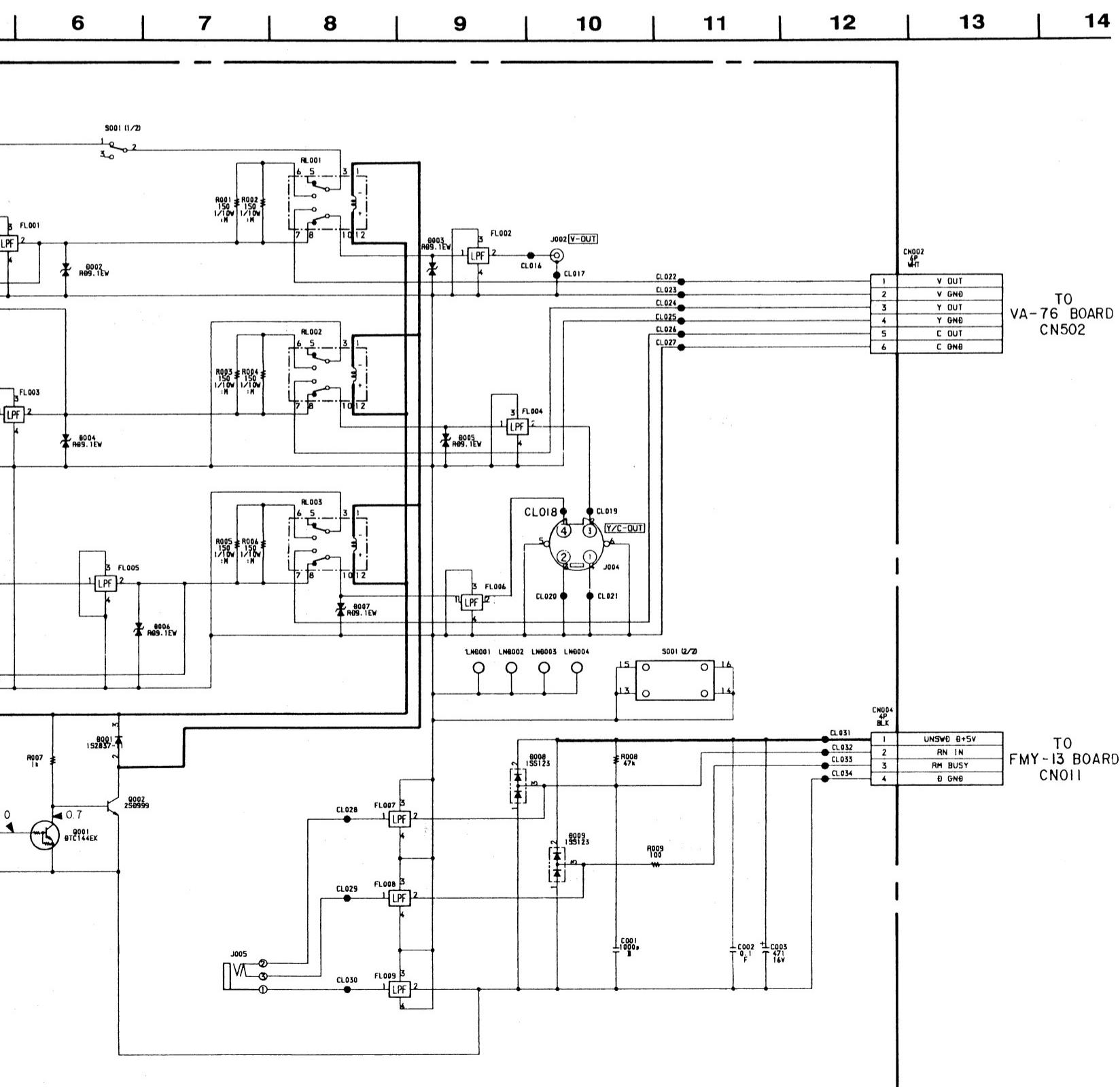
IF-27 -SC

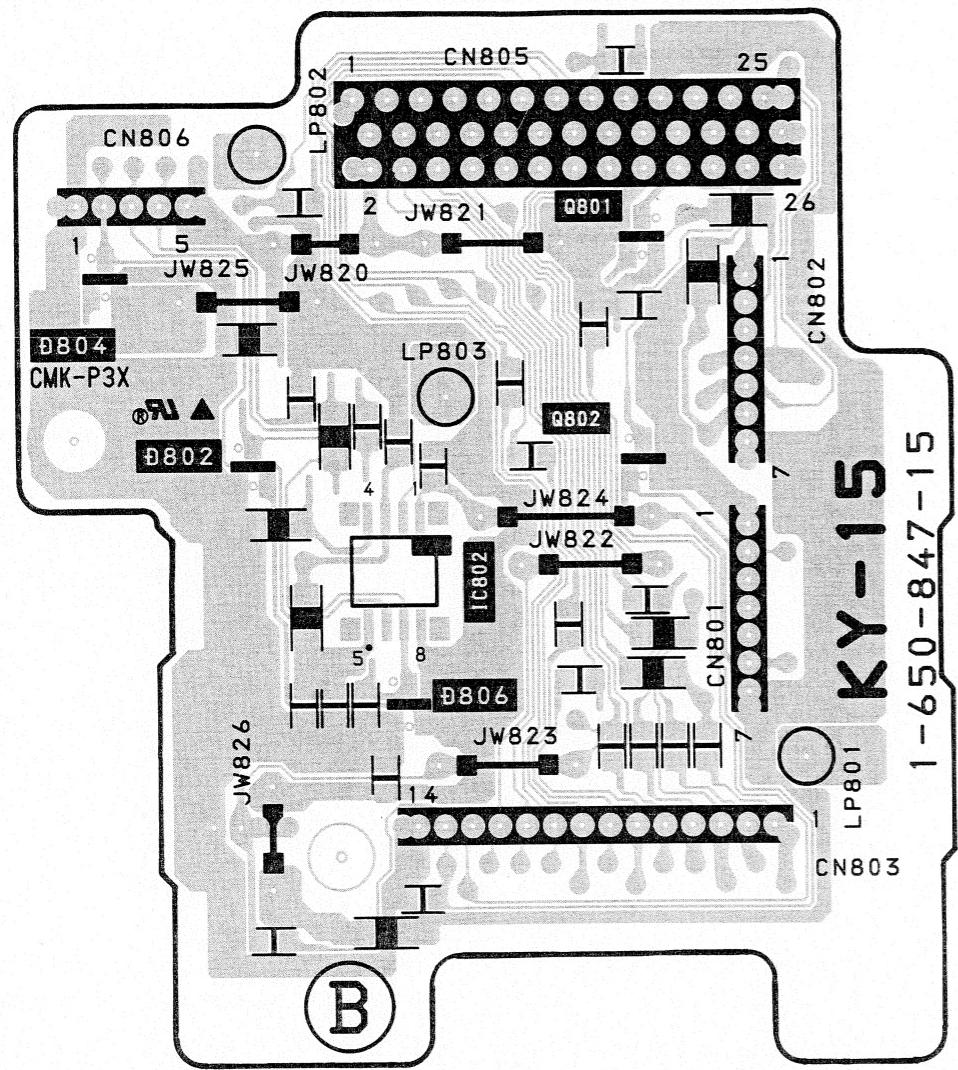
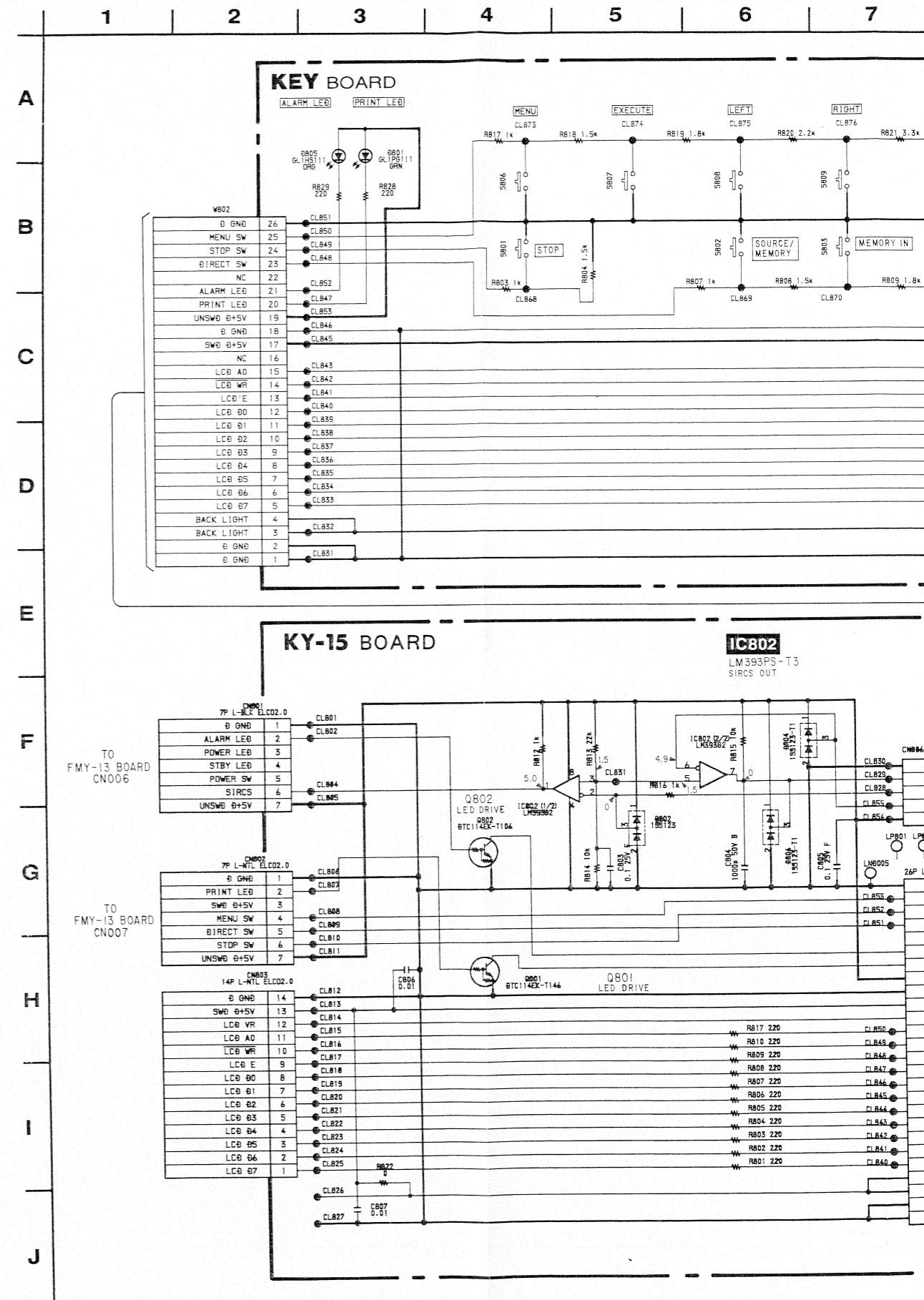
1-650-857-13



IF-27 (IN/OUT TERMINAL)

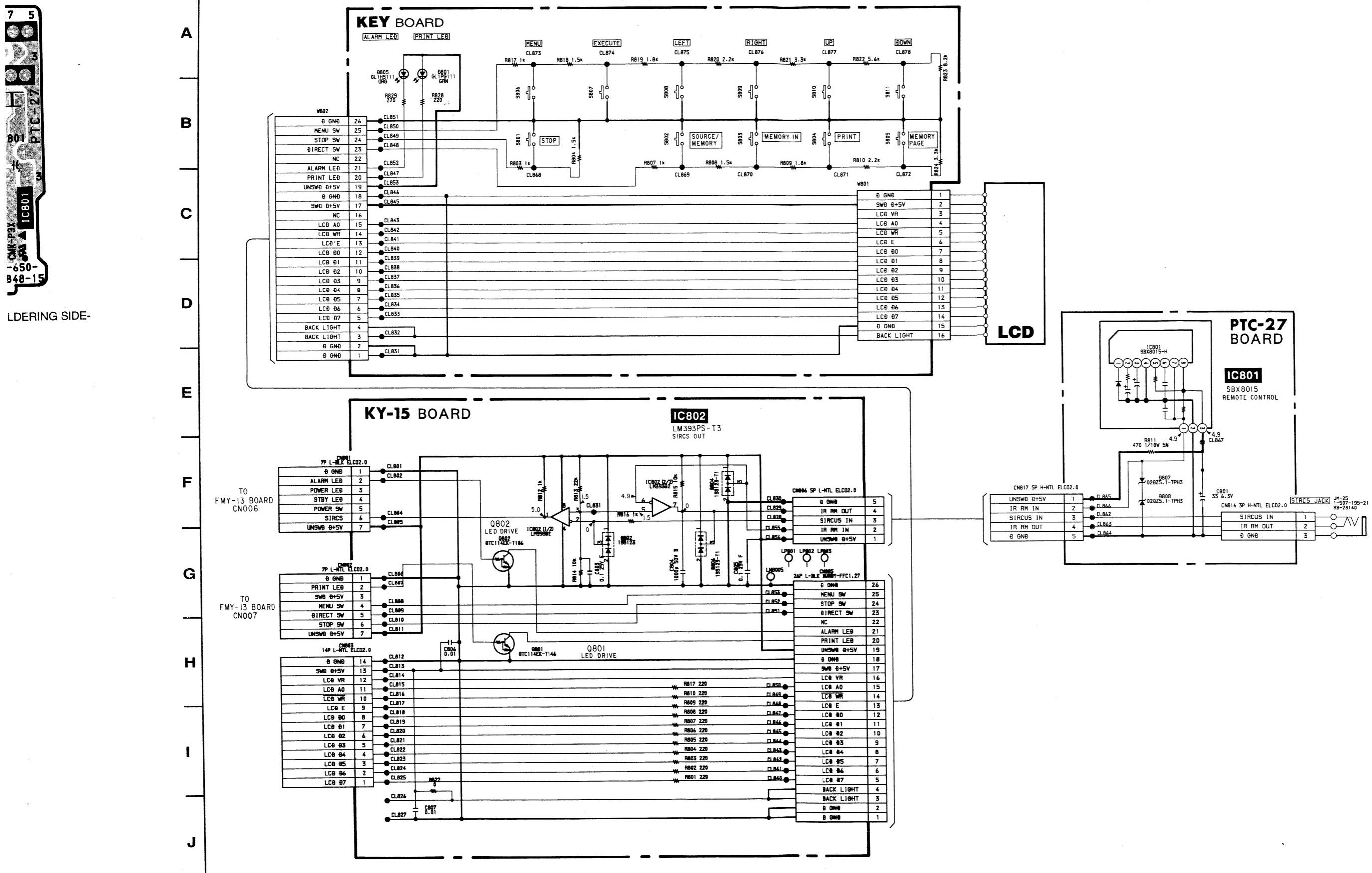




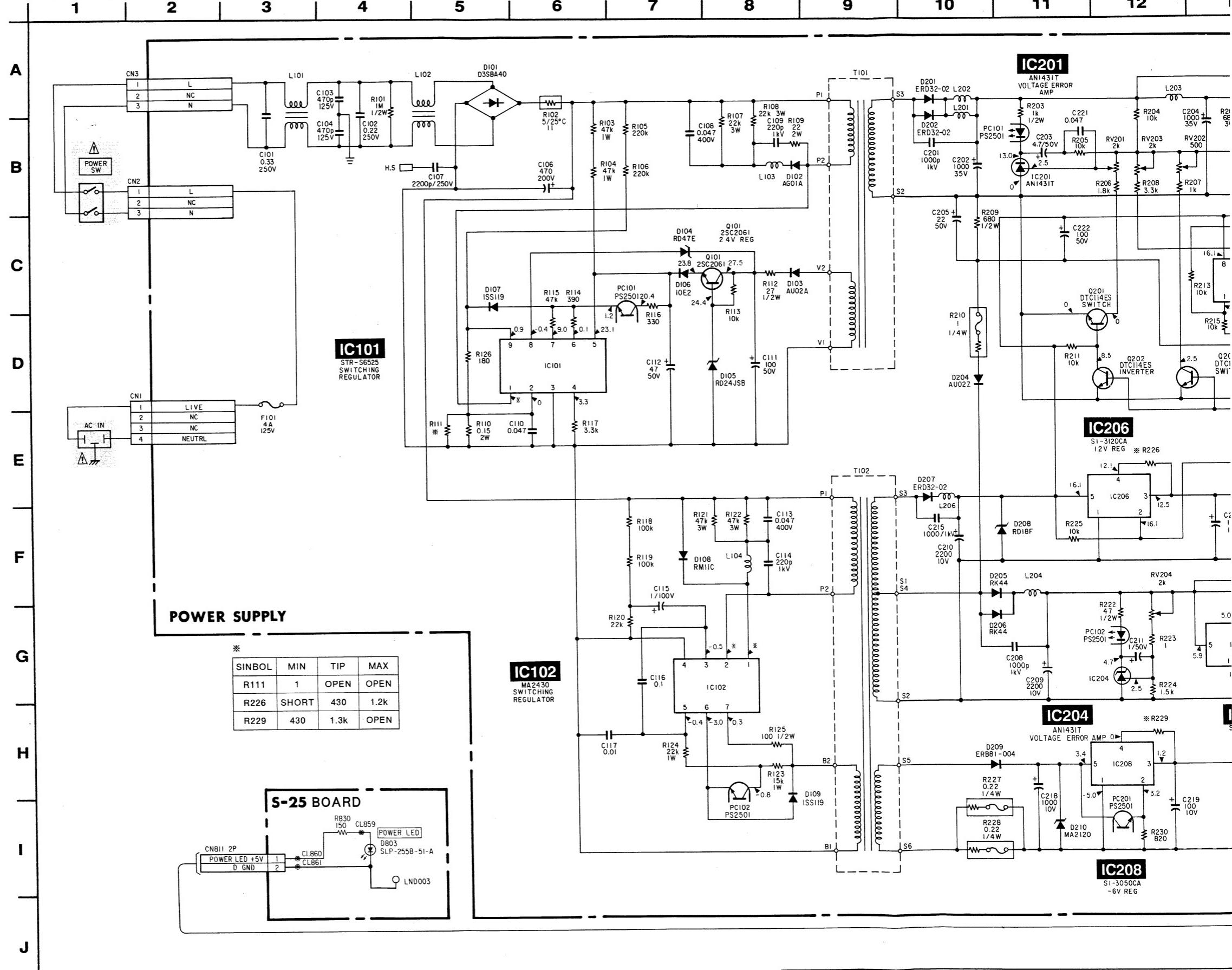
KY-15 -SOLDERING SIDE-
1-650-847-15

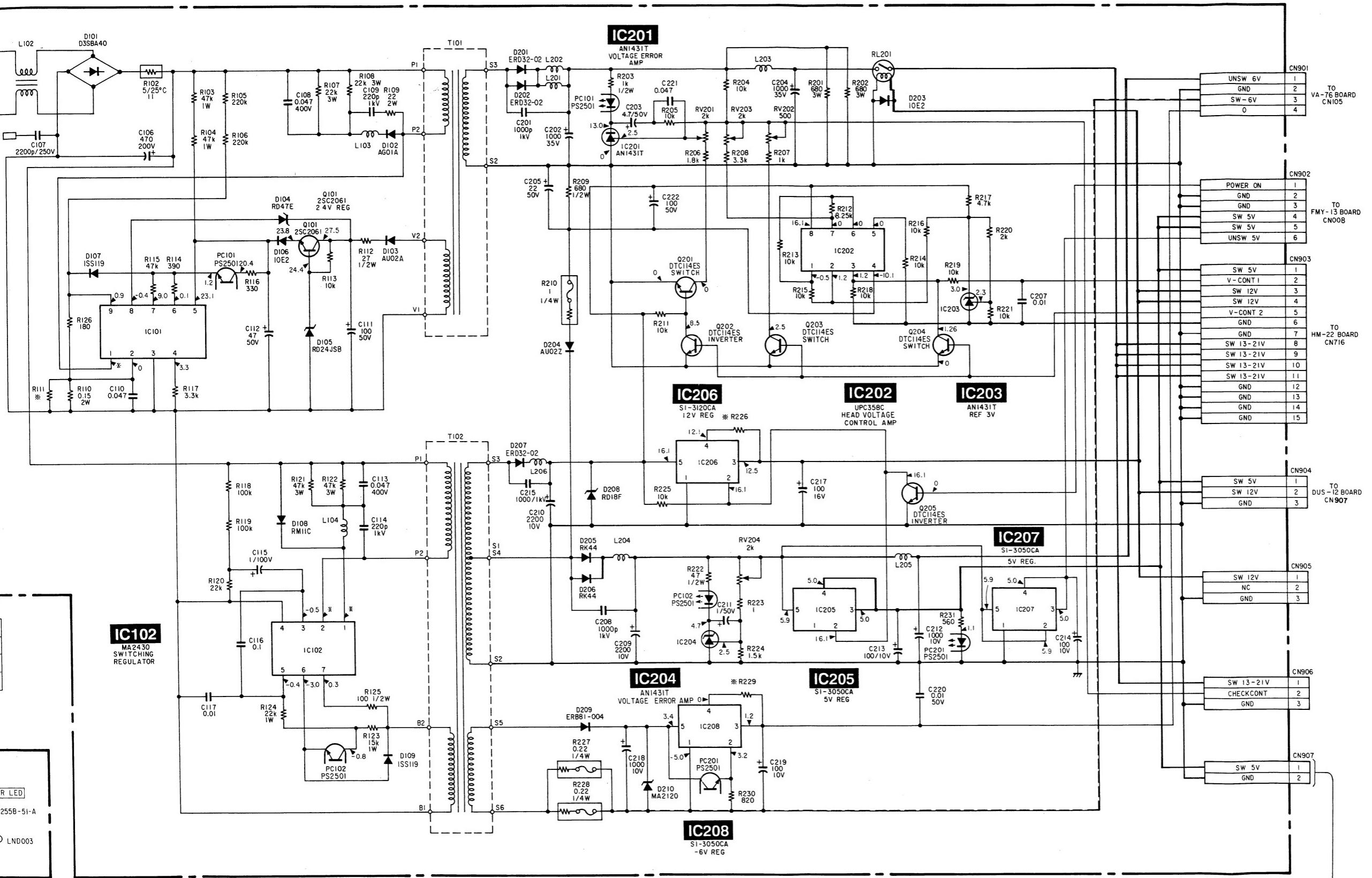
KY-15 (FUNCTION SWITCH) PTC-27 (REMOTE CONTROL SENSOR)

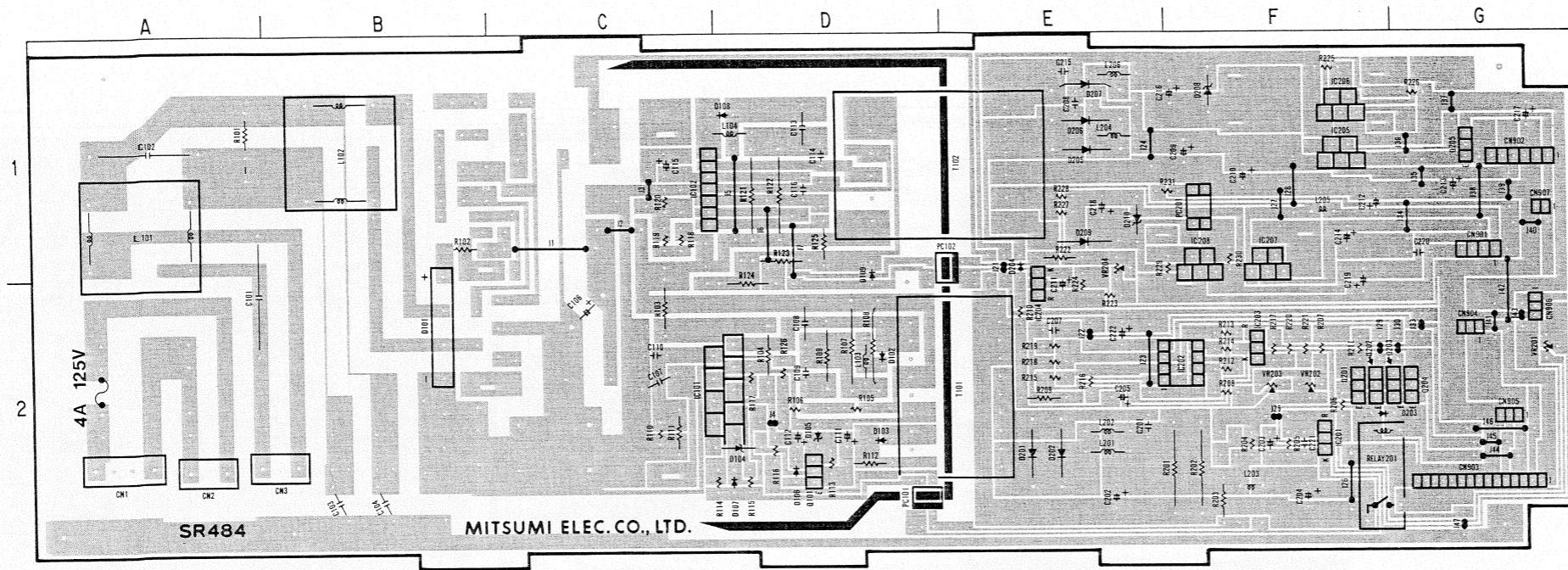
1 | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14**



SWITCHING REGULATOR S-25 (POWER SUPPLY)





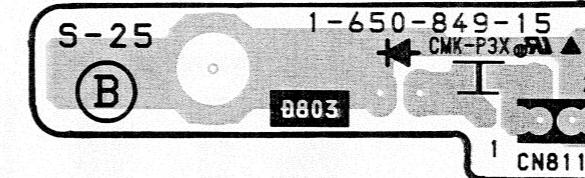
UP-1200A**SWITCHING REGULATOR S-25 (POWER SUPPLY)**

PC -SOLDERING SIDE-
9-907-230-01

SWITCHING REGULATOR

CN1	A-2	L101	A-1
CN2	A-2	L102	B-1
CN3	B-2	L103	D-1
CN901	G-1	L104	D-1
CN902	G-1	L201	E-2
CN903	G-2	L202	E-2
CN904	G-2	L203	F-1
CN905	G-2	L204	E-1
CN906	G-2	L205	F-1
CN907	G-1	L206	E-1
D101	B-2	PC101	D-2
D102	D-2	PC102	E-1
D103	D-2	PC201	F-1
D104	D-2		
D105	D-2	Q101	D-2
D106	D-2	Q202	F-2
D107	D-2	Q202	F-2
D108	D-1	Q203	F-2
D109	D-1	Q204	G-2
D201	E-2	Q205	G-1
D202	E-2	RL201	F-2
D203	F-2		
D204	E-1		
D205	E-1	T101	E-2
D206	E-1	T102	E-1
D207	E-1		
D208	F-1	RV201	G-2
D209	E-1	RV202	F-1
D210	E-1	RV203	F-1
		RV204	E-1
F101			

IC101	C-2
IC102	C-1
IC201	F-2
IC202	F-2
IC203	F-2
IC204	E-2
IC205	F-1
IC206	F-1
IC207	F-1
IC208	F-1

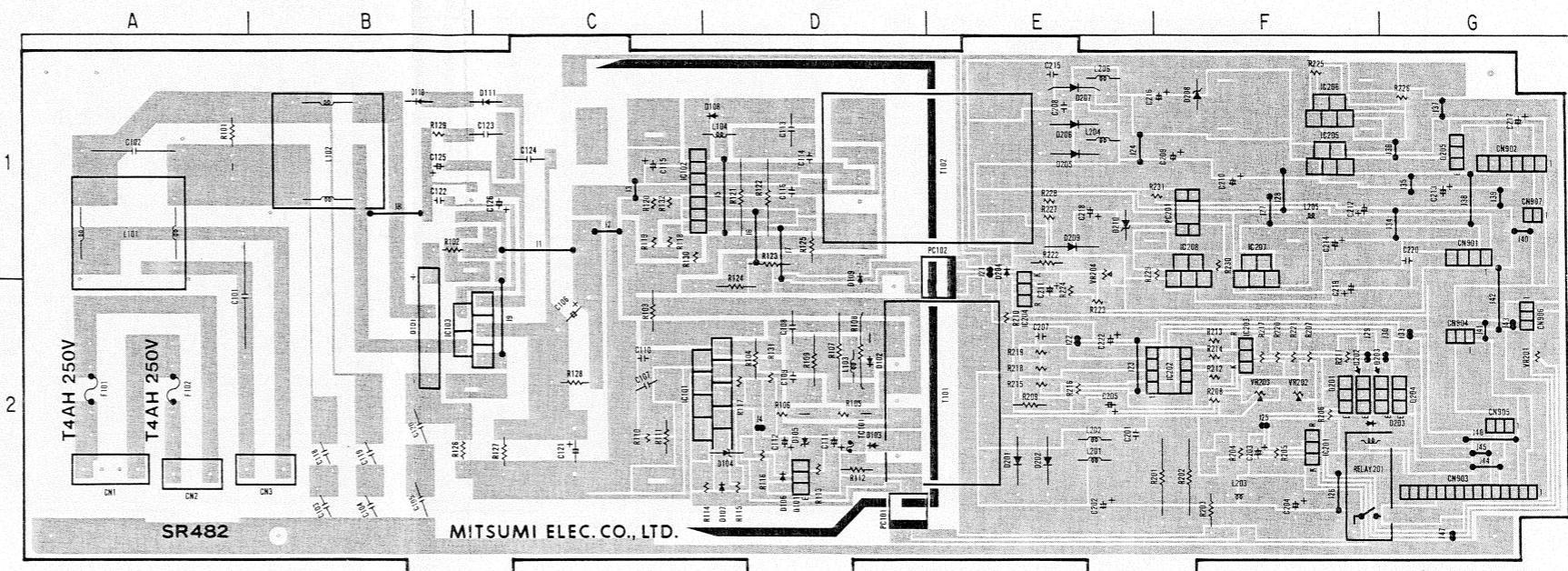


S-25 -SOLDERING SIDE-
1-650-849-15

UP-1200A/1200AEPM

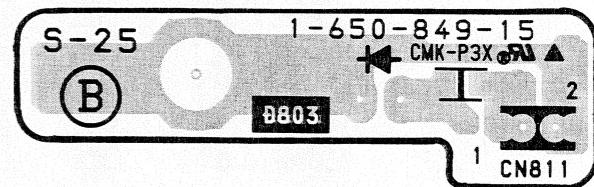
UP-1200AEPM

SWITCHING REGULATOR S-25 (POWER SUPPLY)



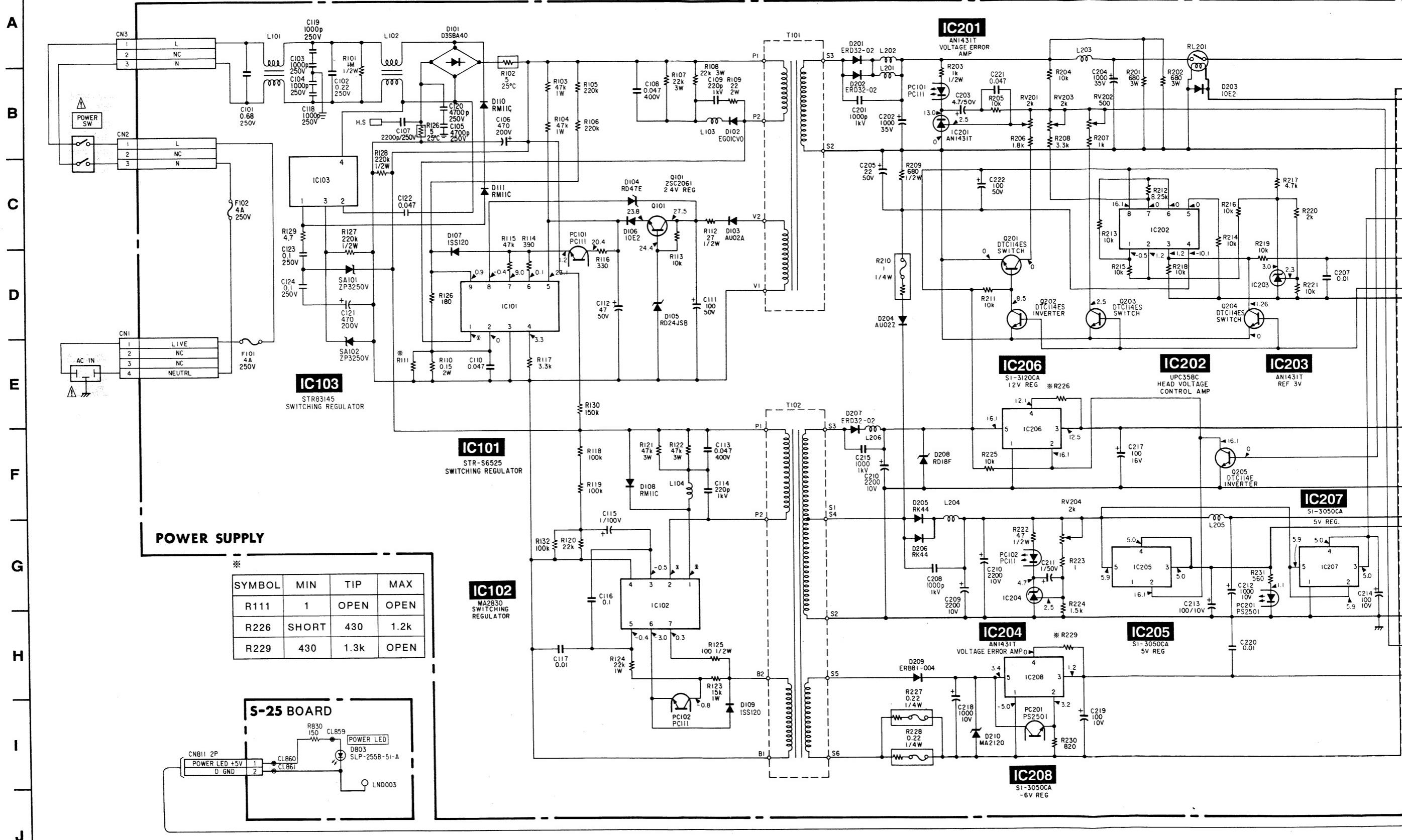
SWITCHING REGULATOR

CN1	A-2	L101	A-1
CN2	A-2	L102	B-1
CN3	B-2	L103	D-1
CN901	G-1	L104	D-1
CN902	G-1	L201	E-2
CN903	G-2	L202	E-2
CN904	G-2	L203	F-1
CN905	G-2	L204	E-1
CN906	G-2	L205	F-1
CN907	G-1	L206	E-1
D101	B-2	PC101	D-2
D102	D-2	PC102	E-1
D103	D-2	PC201	F-1
D104	D-2		
D105	D-2	Q101	D-2
D106	D-2	Q202	F-2
D107	D-2	Q202	F-2
D108	D-1	Q203	F-2
D109	D-1	Q204	G-2
D201	E-2	Q205	G-1
D202	E-2		
D203	F-2	RL201	F-2
D204	E-1		
D205	E-1	T101	E-2
D206	E-1	T102	E-1
D207	E-1		
D208	F-1	RV201	G-2
D209	E-1	RV202	F-1
D210	E-1	RV203	F-1
	F101	RV204	E-1
IC101	C-2		
IC102	C-1		
IC201	F-2		
IC202	F-2		
IC203	F-2		
IC204	E-2		
IC205	F-1		
IC206	F-1		
IC207	F-1		
IC208	F-1		

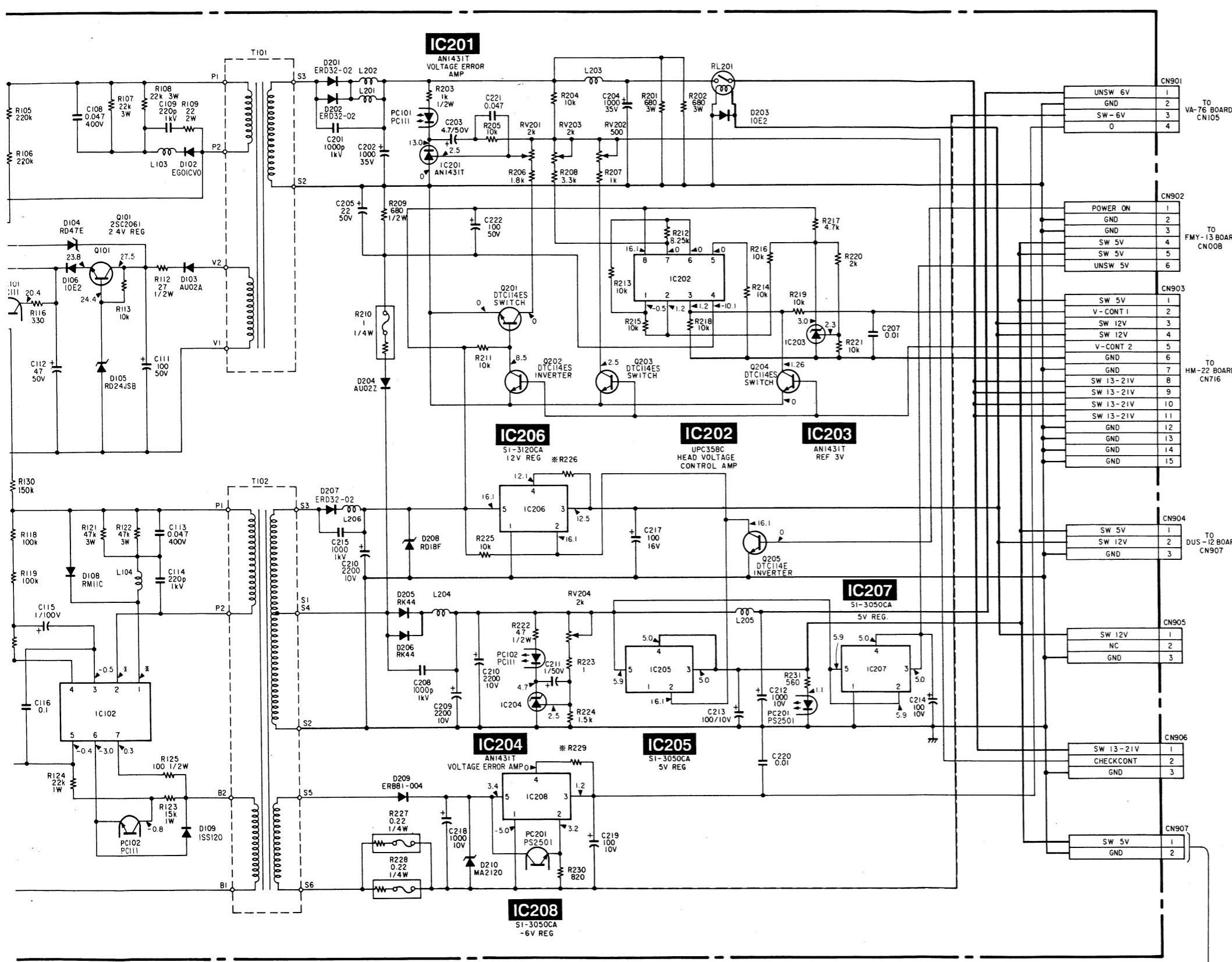


S-25 -SOLDERING SIDE-
1-650-849-15

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



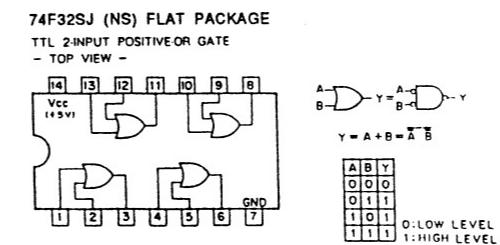
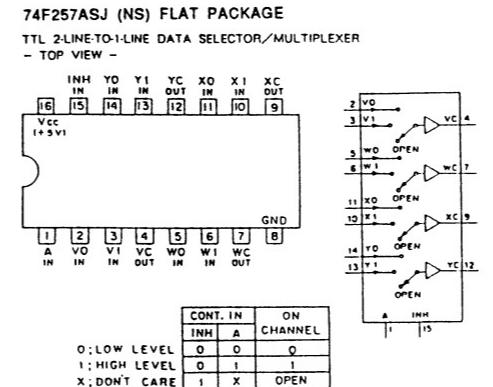
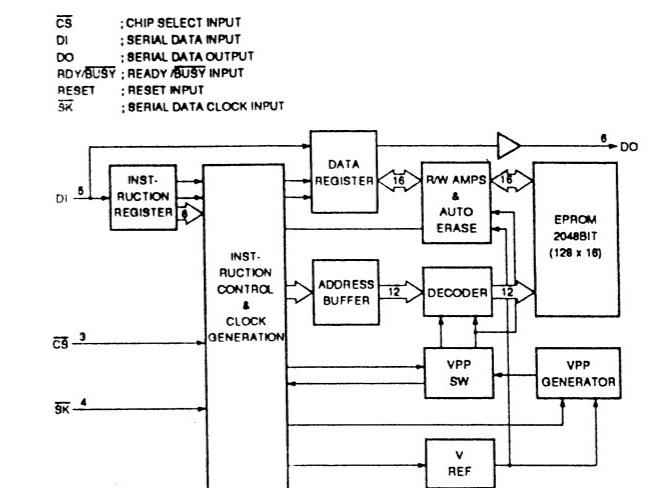
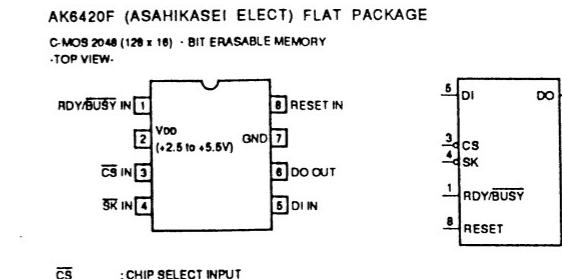
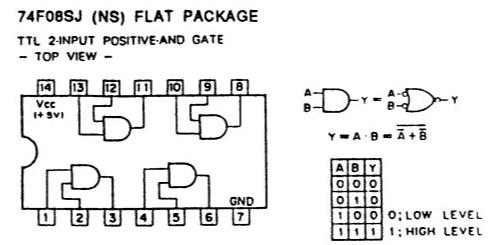
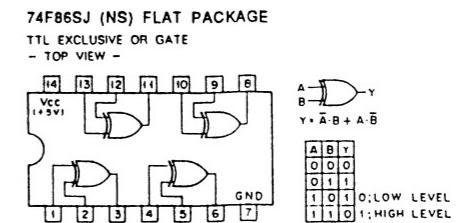
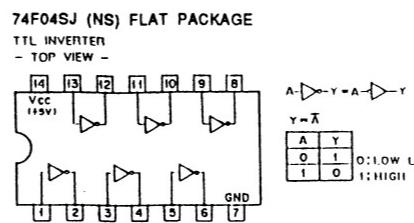
7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19



4-3. SEMICONDUCTORS

The chart in this section may sometimes show diodes, transistors, and ICs that are not interchangeable. When replacing a component, be sure to refer to the parts list. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

TYPE	PAGE	TYPE	PAGE	TYPE	PAGE
02CZ2.0	162	74F08SJ	145	M5M27C101FP-UP12S-E2	155
1S2835	162	74F257ASJ	145	M5M27C101FP-UP18G-E2	155
1S2836	162	74F32SJ	145	M62352GP	156
1S2837	162	74F86SJ	145	MB3863PF-G-BND	156
1SS123	162	AK6420F	145	MB621948	156
1SS226	162	CXA1145M	146	MB89093PFV-G-124-BND	157
1SS300	162	CXA1211M	146	MC74HC4053F	157
1SS302	162	CXA1521M	146	MC74HC574AF	157
1T33C-01	162	CXA1585Q	146	NJM2230M	158
10E-2	162	CXD1159Q	147	NJM2233BM	158
2SA1618	162	CXD1176Q	148	NJM2234M	158
2SB962	162	CXD1178Q	148	NJM2240M	158
2SC1623	162	CXD1217Q	149	NJM2460M	158
2SC4207	162	CXD2023Q	150	NJM4560M	158
2SD992	162	CXD2024Q	150	PQ05SZ1U	158
2SD999-CLK	162	CXD8391Q	151	PQ05TZ1U	158
DTA114EK	162	CXD8444Q	151	RC4558PS	159
DTC114EK	162	CXL5505M	151	S-8054ALB-LM-S	159
DTC124EK	162	CXP80P116Q-1	152	SN74HC00ANS	159
DTC144EK	162	CXP80P116Q-1-236	152	SN74HC04ANS	159
GP1S23	162	CXP80P116Q-1-UP-1800E	152	SN74LS221NS	159
GP1S54	162	DS1000S-50	152	TC4W53F	159
GP2S40K	162	DS1000S-75	152	TC7W00F	159
MA152WK	162	HDC443V2	152	TC7W02F	159
MA8027-L	162	HD6475328F-FMY10-01	153	TC7WU04F	160
MSA1586	162	HD6475368F-FMY13-01	152	TL082CPS	160
MSC4116	162	HM51L240AS7	154	TL431CM	160
RD9.1EW	162	HM514400AS7GS-EL	154	UPC319G2	160
RN1302-TE85L	162	IDT6116SA25S0	154	UPC339G2	160
SBX8015-H	162	LM358D	154	UPD65006GF-250-3B8	160
SLP-255B	162	LM324D	155	UPD65013GF-407-3BA	161
XN2401	163	M50555-218FP	155		
XN4501	163	M54544AL	155		
XN4601	163	M5M27C101FP-UP12G-E2	155		
74F04SJ	145	M5M27C101FP-UP12M-E2	155		



CXA1145M (S)
RGB COMPOSITE
- TOP VIEW -

R IN 1
G IN 2
B IN 4
XO OUT 5
XO IN 6
NTSC/PAL IN 7
AUDIO IN 8
AUDIO OUT 9
C SYNC IN 10
C SYNC OUT 11
D 12

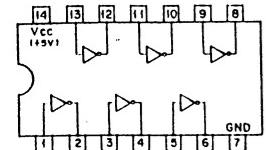
AUDIO IN 13
C SYNC IN 14
C SYNC OUT 15
D 16

R IN 17
G IN 18

74F04SJ (NS) FLAT PACKAGE

TTL INVERTER

TOP VIEW



$$A \rightarrow Y = \bar{A} \rightarrow Y$$

$$Y = \bar{A}$$

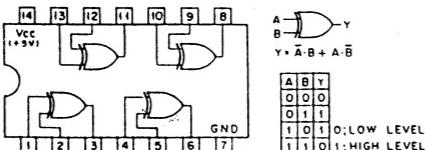
A	Y
0	1
1	0

0: LOW LEVEL
1: HIGH LEVEL

74F86SJ (NS) FLAT PACKAGE

TTL EXCLUSIVE OR GATE

TOP VIEW



$$A \rightarrow Y = A \oplus B \rightarrow Y$$

$$Y = A \oplus B$$

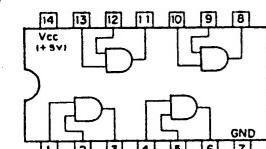
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

74F08SJ (NS) FLAT PACKAGE

TTL 2-INPUT POSITIVE-AND GATE

TOP VIEW



$$A \rightarrow Y = A \cdot B \rightarrow Y$$

$$Y = A \cdot B$$

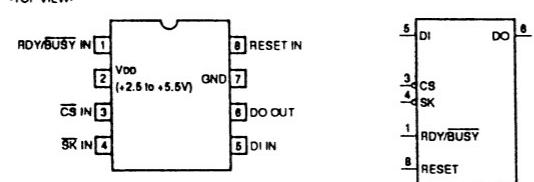
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0: LOW LEVEL
1: HIGH LEVEL

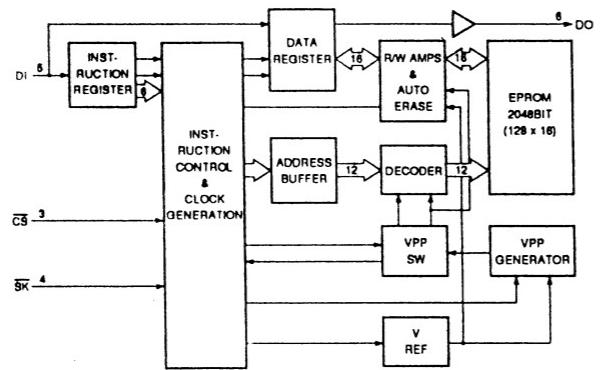
AK6420F (ASAHIKASEI ELECT) FLAT PACKAGE

C-MOS 2048 (128 x 16) - BIT ERASABLE MEMORY

TOP VIEW



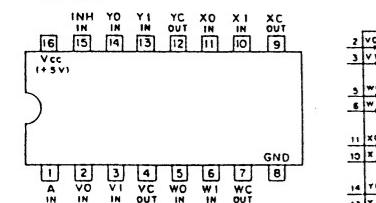
CS : CHIP SELECT INPUT
DI : SERIAL DATA INPUT
DO : SERIAL DATA OUTPUT
RDY/BUSY : READY/BUSY INPUT
RESET : RESET INPUT
SK : SERIAL DATA CLOCK INPUT



74F257ASJ (NS) FLAT PACKAGE

TTL 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER

TOP VIEW



CONT. IN	ON
INH	A CHANNEL
0; LOW LEVEL	0
1; HIGH LEVEL	1
X; DONT CARE	OPEN

0: LOW LEVEL
1: HIGH LEVEL
X: DONT CARE

$$A \rightarrow Y = \bar{A} \rightarrow Y$$

$$Y = \bar{A}$$

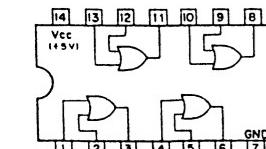
A	Y
0	1
1	0

0: LOW LEVEL
1: HIGH LEVEL

74F32SJ (NS) FLAT PACKAGE

TTL 2-INPUT POSITIVE-OR GATE

TOP VIEW



$$A \rightarrow Y = A + B \rightarrow Y$$

$$Y = A + B$$

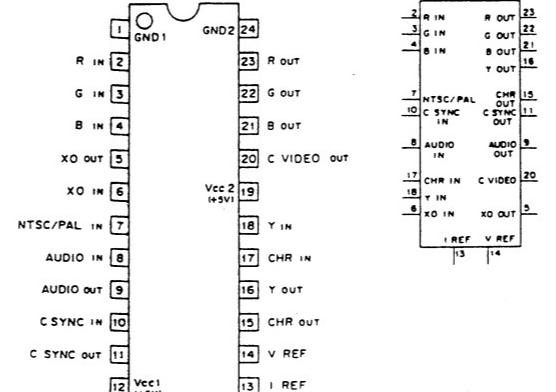
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0: LOW LEVEL
1: HIGH LEVEL

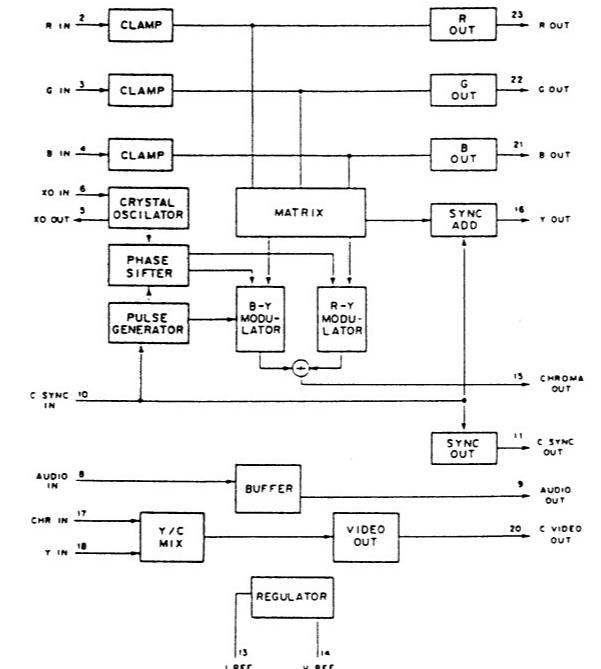
CXA1145M (SONY) FLAT PACKAGE

RGB COMPOSITE ENCODER

TOP VIEW



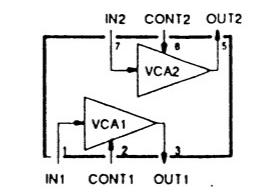
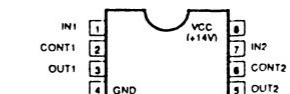
AUDIO : AUDIO INPUT/OUTPUT
B : BLUE OUTPUT
CHR : CHROMA SIGNAL INPUT/OUTPUT
C SYNC : CHROMA SYNC INPUT/OUTPUT
C VIDEO : CHROMA VIDEO OUTPUT
G : GREEN OUTPUT
NTSC/PAL : NTSC/PAL SELECT INPUT
R : RED OUTPUT
V REF : REFERENCE VOLTAGE
XO : CRYSTAL OSCILLATOR INPUT/OUTPUT
Y : Y-SIGNAL INPUT/OUTPUT



CXA1211M (SONY) ELECTRONIC VOLUME

ELECTRONIC VOLUME

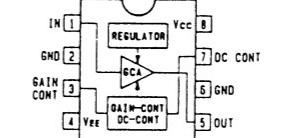
TOP VIEW



CXA1521M (SONY)

GAIN CONTROL AMP

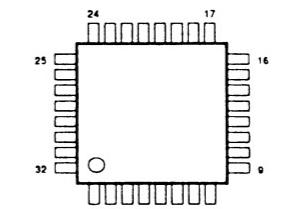
TOP VIEW



CXA1585Q (SONY)

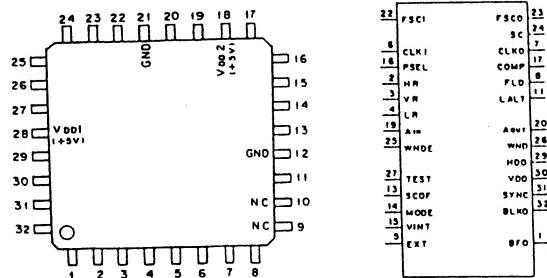
C-MOS R.G.B DECODER

TOP VIEW

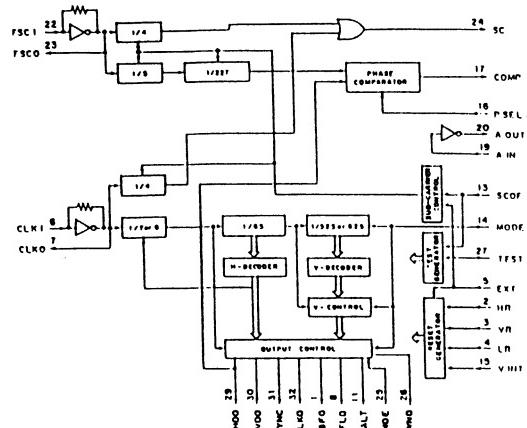


CXD1159Q (SONY)

C-MOS SYNC GENERATOR
- TOP VIEW -



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	BFO	9	-	NC	17	O	COMP	25	I	WNDE
2	I	HR	10	-	NC	18	-	VDD ₂ (+5V)	26	O	WND
3	I	VR	11	O	LALT	19	I	AOUT	27	I	TEST
4	I	LR	12	-	GND	20	O	AOUT	28	-	VDD ₁ (+5V)
5	I	EXT	13	I	SCOF	21	-	GND	29	O	HDO
6	I	CLK1	14	I	MODE	22	I	FSC1	30	O	VDO
7	O	CLK0	15	I	VINT	23	O	FSC0	31	O	SYNC
8	O	FLD	16	I	PSEL	24	O	SC	32	O	BLKO



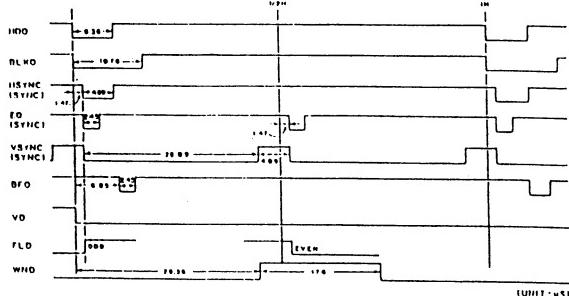
INPUT

- AIN : FILTER INVERTER INPUT
- CLK1 : CLOCK INPUT
(NTSC : 14.31818MHz
PAL : 14.1875MHz)
- EXT : INT/EXT (L : INT)
FSC1 : AFSC CLOCK INPUT
- HR : H RESET
- LR : LALT RESET
- MODE : NTSC/PAL (L : NTSC)
- PSEL : POLARITY SELECT FOR PHASE COMP
- SCOF : SUBCARRIER OFF (L : OFF)
- TEST : TEST INPUT
- VINT : INITIALIZE
- VR : V RESET
- WHDE : WINDOW ENABLE

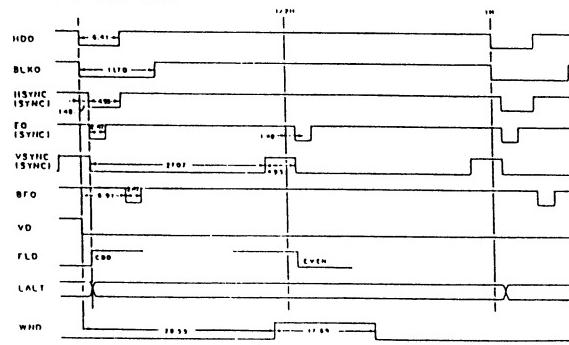
OUTPUT

- AOUT : FILTER INVERTER OUTPUT
- BFO : BURST FLAG PULSE
- BLKO : COMPOSITE BLANKING PULSE
- CLK0 : CLOCK OUTPUT
- COMP : PHASE COMP
- FLD : FIELD PULSE
- FSC0 : AFSC CLOCK OUTPUT
- HDO : H DRIVE PULSE
- LALT : LINE ALTERNATE PULSE
- SCOF : SUBCARRIER PULSE
- SYNC : COMPOSITE SYNC PULSE
- VDO : V DRIVE PULSE
- WHD : WINDOW

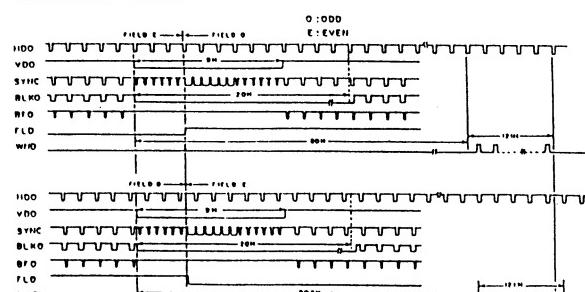
TIMING CHART II (NTSC)



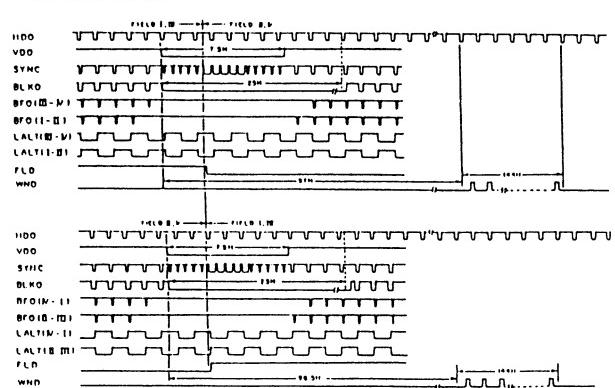
TIMING CHART II (PAL)



TIMING CHART V (NTSC)

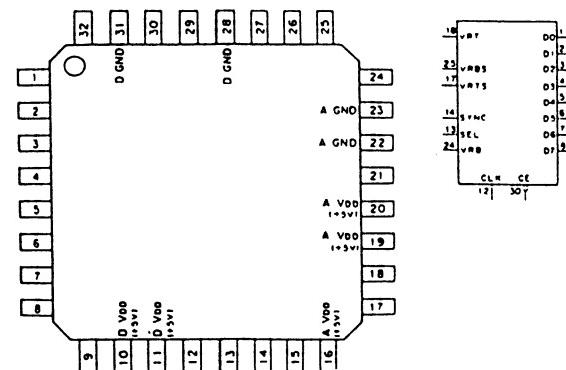


TIMING CHART V (PAL)



CXD1176Q (SONY)

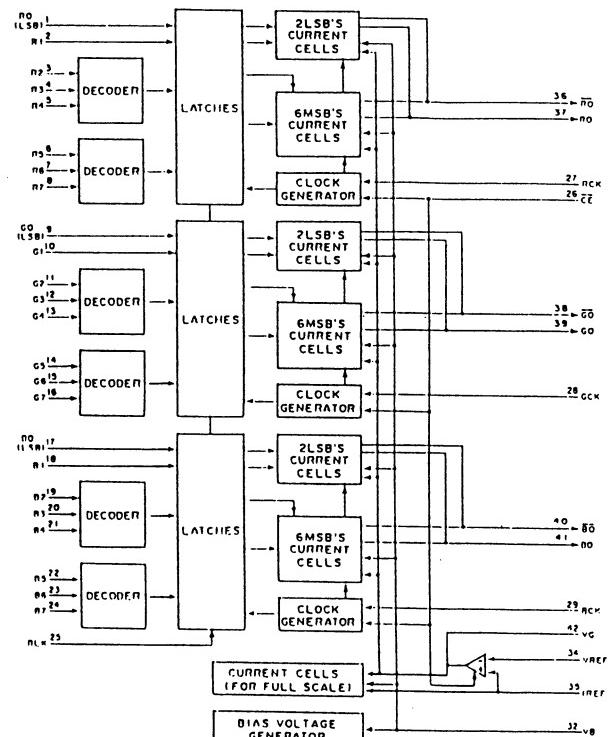
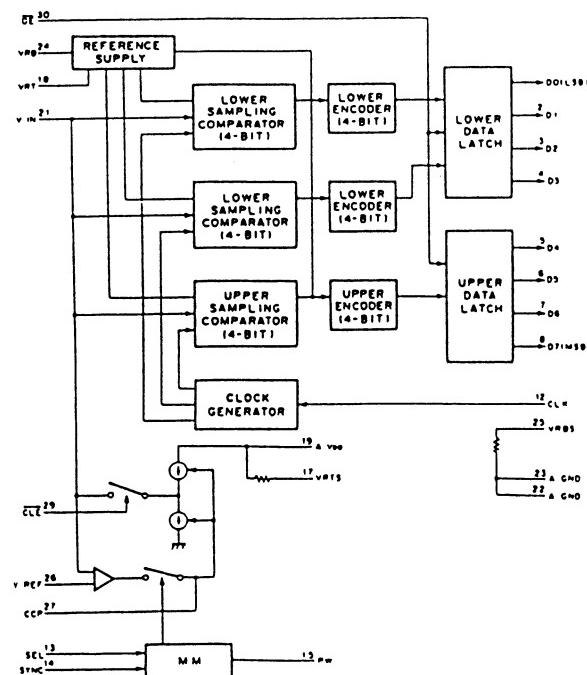
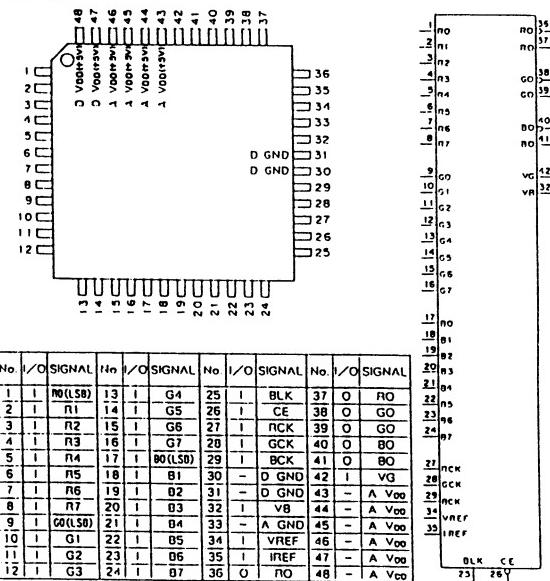
C-MOS 8-BIT 20MSPS VIDEO A/D CONVERTER WITH CLAMP FUNCTION
- TOP VIEW -



No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL
1	0	D0(LSB)	9	-	X.C.	17	0	V _{RST}	25	0	V _{BS}
2	0	81	10	-	0 V _D	18	0	V _{RT}	26	1	V _{REF}
3	0	92	11	-	0 V _D	19	-	A V _D	27	1	CCP
4	0	93	12	1	CLK	20	-	A V _D	28	-	0 GND
5	0	94	13	1	SEL	21	1	V _{IN}	29	1	CLE
6	0	95	14	1	SYNC	22	-	A V _D	30	0	DE
7	0	96	15	1	PV	23	-	A GND	31	-	0 GND
8	0	BT1NSB	16	-	A V _D	24	0	VBS	32	-	NC

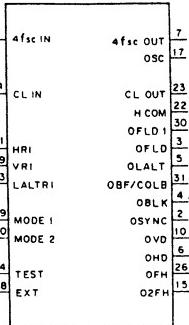
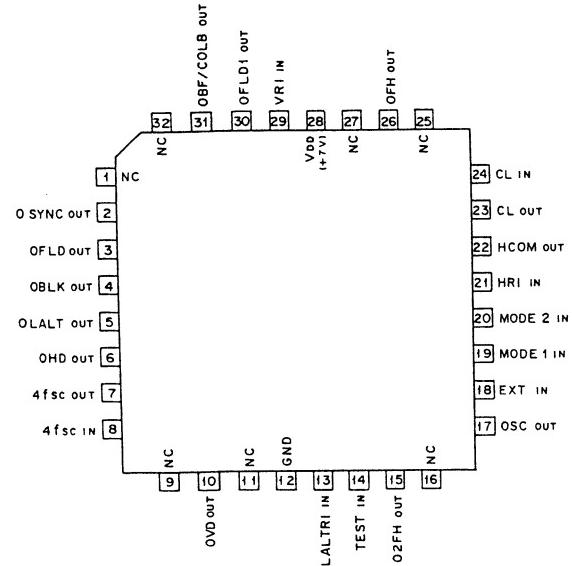
CXD1178Q (SONY) FLAT PACKAGE

C-MOS 3CH 8-BIT 40MHz D/A CONVERTER
- TOP VIEW -



CXD1217Q (SONY) FLAT PACKAGE
C-MOS SYNC GENERATOR

- TOP VIEW -



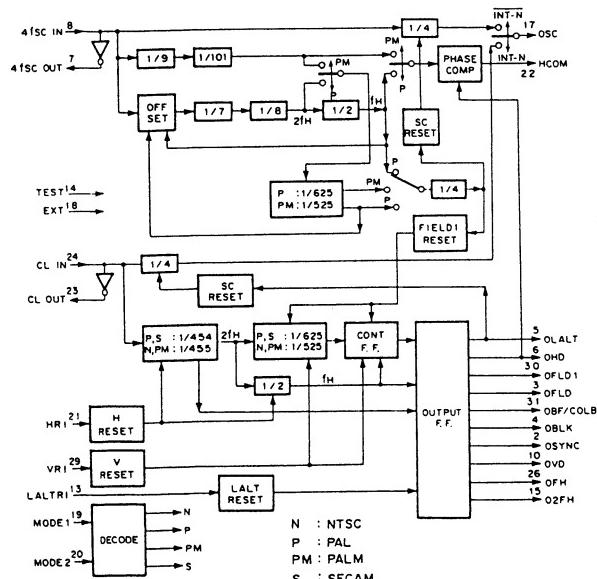
SYSTEM	4fsc	CLOCK
NTSC	910fh	910fh
PAL	1135fh + 2fh	908fh
PALM	909fh	910fh
SECAM	—	908fh

INPUT	SYSTEM
MODE1	NTSC
0	0
1	SECAM
MODE2	PALM
1	PAL

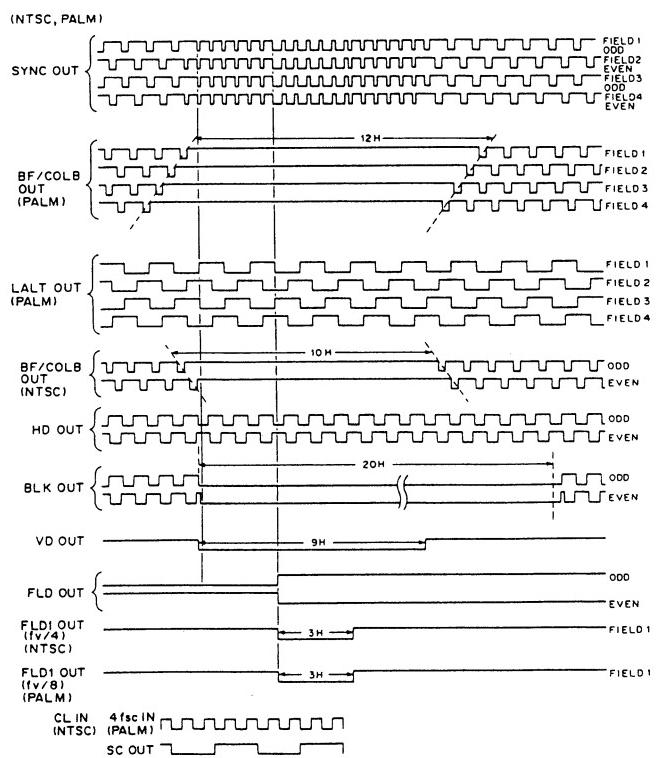
0 : LOW LEVEL
1 : HIGH LEVEL

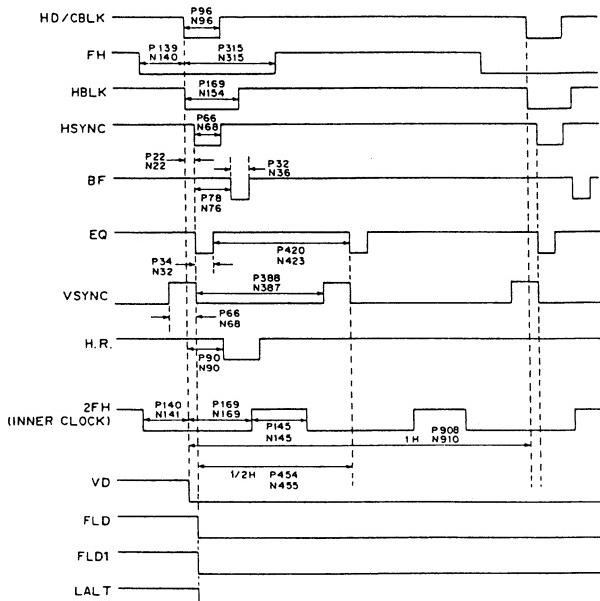
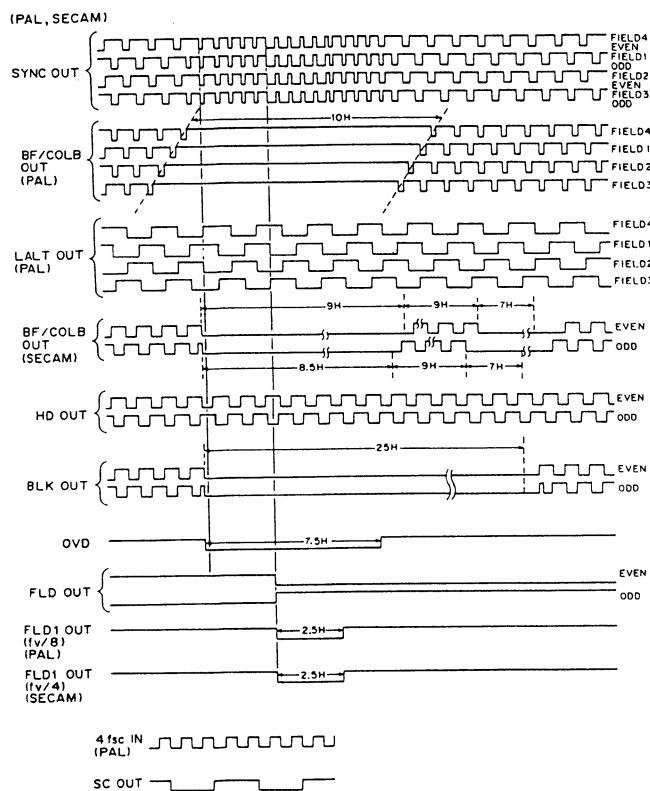
INPUT
4fsc IN : 4fsc
CL IN : CLOCK
EXT : SYNC MODE SELECT
(L : INTERNAL/H : EXTERNAL)
HRI : HORIZONTAL RESET
LALTRI : LINE ALTERNATE RESET
MODE1,2 : SYSTEM SELECT
VRI : VERTICAL RESET

OUTPUT
4fsc OUT : 4fsc
CL OUT : CLOCK
HCOM : PHASE COMPATOR
O2FH : 2fh
OBF/COLB : BURST FLAG/COLOR BLANKING
OBLK : COMPOSITE BLANKING
OFH : FIELD PULSE
OFLD1 : FIELD1
OHD : HORIZONTAL DRIVE
OBLT : LINE ALTERNATE
OSC : SUBCARRIER
OSYNC : COMPOSITE SYNC
OVD : VERTICAL DRIVE



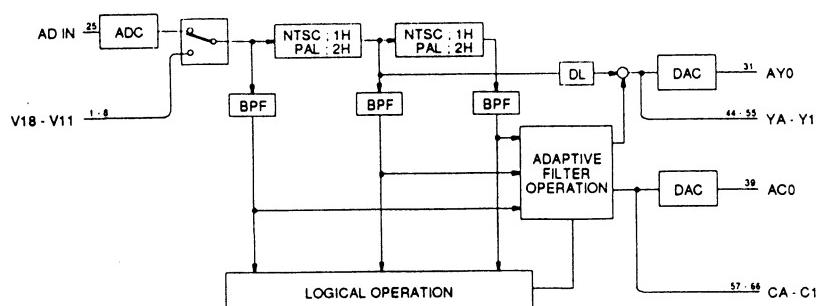
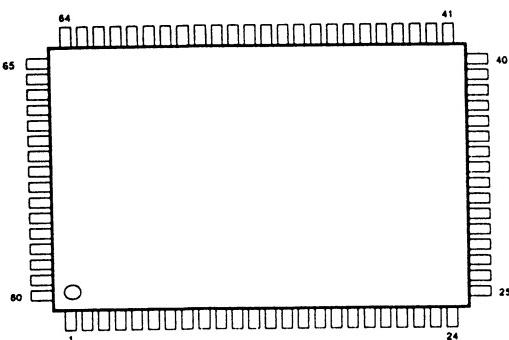
N : NTSC
P : PAL
PM : PALM
S : SECAM



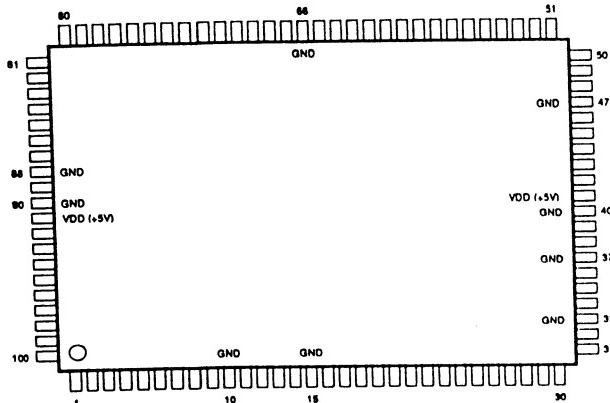


P: PAL, SECAM
N: NTSC, PALM

CXD2023Q (SONY)
CXD2024Q (SONY)
C-MOS DIGITAL COMB FILTER (NTSC/PAL)
— TOP VIEW —

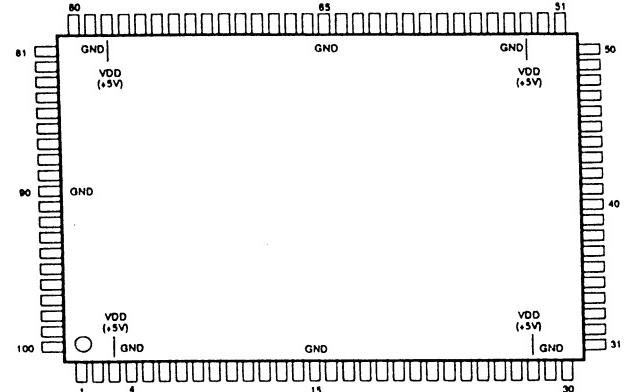


CXD8391Q (SONY)
C-MOS GATE ARRAY
— TOP VIEW —



PIN No.	SIGNAL	PIN No.	SIGNAL	PIN No.	SIGNAL	PIN No.	SIGNAL
1	P47	26	P21	51	A20	76	D07
2	P46	27	P20	52	A19	77	D06
3	P45	28	P17	53	CS0	78	D05
4	P44	29	P16	54	CS1	79	D04
5	P43	30	P15	55	CS2	80	D03
6	P42	31	P14	56	A18	81	D02
7	P41	32	P13	57	A17	82	D01
8	P40	33	GND	58	A16	83	D00
9	WRP	34	RAS	59	A15	84	RES
10	GND	35	RC	60	A14	85	WR
11	P37	36	CAS	61	A13	86	DRO2
12	P38	37	GND	62	A12	87	DRO1
13	P35	38	DBRQ	63	A11	88	GND
14	P34	39	ABRQ	64	A10	89	CK
15	GND	40	GND	65	A09	90	GND
16	P33	41	VDD (+5V)	66	GND	91	VDD (+5V)
17	P32	42	PWR	67	A08	92	WRC
18	P31	43	BPWR	68	A07	93	P57
19	P30	44	P12	69	A06	94	P56
20	P27	45	P11	70	A05	95	P55
21	P26	46	P10	71	A04	96	P54
22	P25	47	GND	72	A03	97	P53
23	P24	48	A23	73	A02	98	P52
24	P23	49	A22	74	A01	99	P51
25	P22	50	A21	75	A00	100	P50

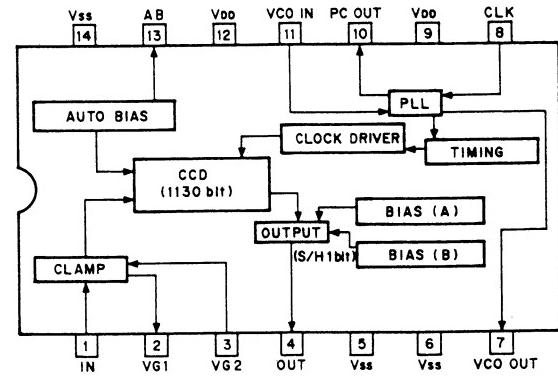
CXD8444Q (SONY)
C-MOS GATE ARRAY
— TOP VIEW —



PIN No.	I/O	SIGNAL									
1	I	TRIM	26	O	RO2	51	O	BO2	76	I	ADON
2	I	CAPEN	27	O	RO3	52	O	BO3	77	O	AOOE
3	-	VDD (+5V)	28	-	VDD (+5V)	53	-	VDD (+5V)	78	-	VDD (+5V)
4	-	VSS	29	-	VSS	54	-	VSS	79	-	VSS
5	VO	DBUS7	30	O	RO4	55	O	BO4	80	I	CLR
6	VO	DBUS6	31	O	RO5	56	O	BO5	81	-	N.C
7	VO	DBUS5	32	O	RO6	57	O	BO6	82	VO	GBUS6
8	VO	DBUS4	33	O	RO7	58	O	BO7	83	VO	GBUS7
9	VO	DBUS3	34	I	Y3A	59	VO	BBUS0	84	VO	RBUS0
10	VO	DBUS2	35	I	Y3B	60	VO	BBUS1	85	VO	RBUS1
11	VO	DBUS1	36	O	GO0	61	VO	BBUS2	86	I	BWX
12	VO	DBUS0	37	O	GO1	62	VO	BBUS3	87	I	CLKA
13	O	XWRPD	38	O	GO2	63	O	ACK	88	I	OE1
14	O	WRPD	39	O	GO3	64	O	SO	89	I	CLK
15	-	VSS	40	-	VSS	65	-	VSS	90	-	VSS
16	O	BLK	41	O	GO4	66	VO	BBUS4	91	O	STDCLK
17	I	STD	42	O	GO5	67	VO	BBUS5	92	I	OE2
18	I	CLKSEL	43	O	GO6	68	VO	BBUS6	93	I	CLKB
19	I	DAON	44	O	GO7	69	VO	BBUS7	94	I	OE3
20	I	WRP	45	I	SCK	70	VO	GBUS0	95	VO	RBUS2
21	I	COLA	46	I	VD	71	VO	GBUS1	96	VO	RBUS3
22	I	COLB	47	I	SI	72	VO	GBUS2	97	VO	RBUS4
23	I	POFF	48	I	CS	73	VO	GBUS3	98	VO	RBUS5
24	O	RO0	49	O	BO0	74	VO	GBUS4	99	VO	RBUS6
25	O	RO1	50	O	BO1	75	VO	GBUS5	100	VO	RBUS7

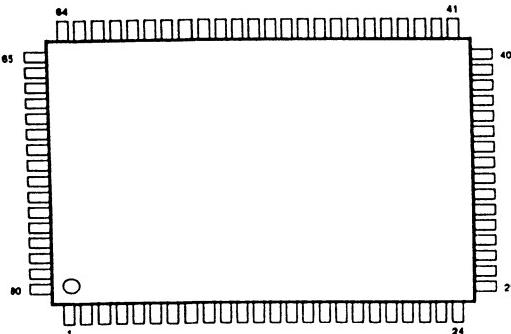
CXL5505M (SONY)
CMOS-CCD 1H DELAY LINE

— TOP VIEW —

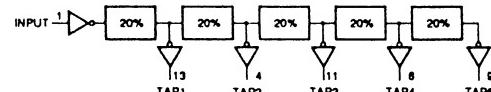
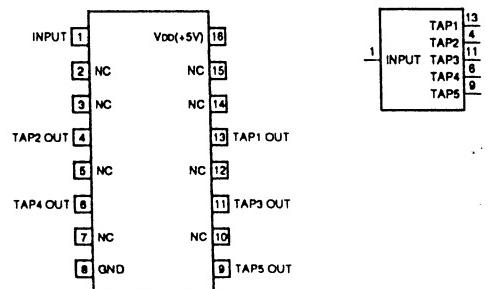


CXP80P116Q-1
CXP80P116Q-1-236
CXP80P116Q-1-UP1800E
C-MOS 8-BIT MICRO PROCESSING UNIT

- TOP VIEW -

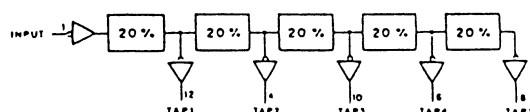
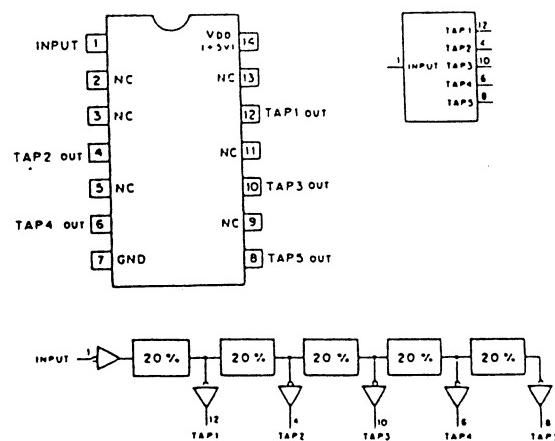


DS1000S-75 (DALLAS SEMICONDUCTOR)(DELAY TIME=75 nS)
C-MOS DELAY LINE
-TOP VIEW-



	DELAY TIME (nS)				
	TAP1	TAP2	TAP3	TAP4	TAP5
1	16	30	45	60	75

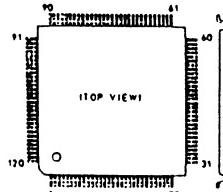
DS1000S-50 (DALLAS SEMICONDUCTOR)(DELAY TIME=50 nS)
C-MOS DELAY LINE
- TOP VIEW -



TYPE. NO.	DELAY TIME (ns)				
	TAP1	TAP2	TAP3	TAP4	TAP5
DS1000S-50	10	20	30	40	50
DS1000S-60	12	24	36	48	60
DS1000S-75	15	30	45	60	75
DS1000S-100	20	40	60	80	100
DS1000S-125	25	50	75	100	125
DS1000S-150	30	60	90	120	150
DS1000S-175	35	70	105	140	175
DS1000S-200	40	80	120	160	200
DS1000S-250	50	100	150	200	250
DS1000S-300	100	200	300	400	500

HDC443V2 (HITACHI)

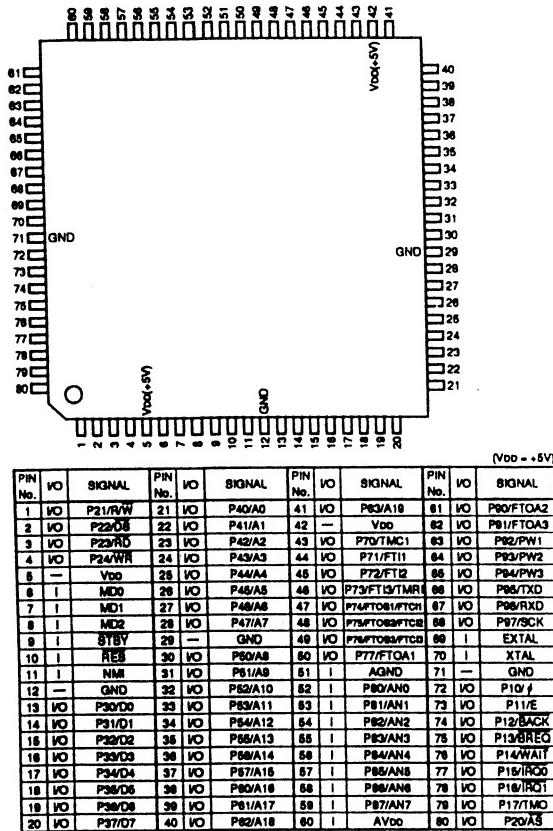
- TOP VIEW -



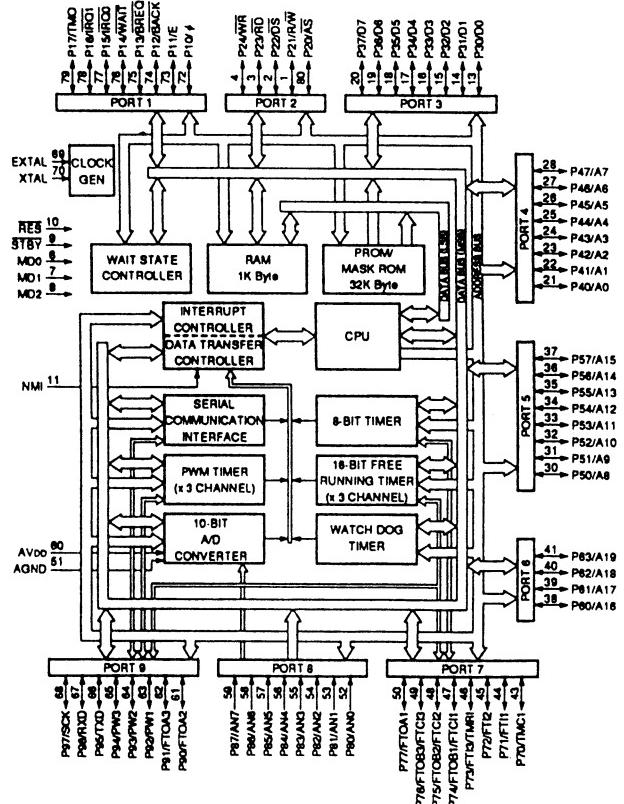
No.	I/O	Name									
1	-	VDD	31	-	GND	61	-	VDD	91	-	GND
2	O	DTT0	32	O	DTE	62	I/O	DAA	92	I	WR
3	O	DTT1	33	I	DCK	63	I/O	DA9	93	I	DDDD
4	O	DTT2	34	I	TMGP	64	I/O	DA8	94	I	DDD1
5	O	DTT3	35	I	PRIN	65	O	CHOO	95	I	DDD2
6	O	DTT4	36	I	PRNS	66	O	AFOO	96	I	DDD3
7	O	DTT5	37	I	RESE	67	O	AAAB	97	I	DDD4
8	O	DTT6	38	I	L17	68	O	ABBB	98	I	DDDS
9	O	DTT7	39	I	L16	69	I	TSA	99	I	DDD6
10	O	DTT8	40	I	L15	70	I	TSB	100	I	DDD7
11	O	DTT9	41	I	L14	71	I	RWA	101	I	A0A
12	O	DTTA	42	I	L13	72	I	RWB	102	I	A1A
13	I	TI07	43	I	L12	73	I	RWC	103	I	A2A
14	O	TO04	44	I	L11	74	I	LG	104	I	A3A
15	-	GND	45	I	L10	75	-	GND	105	I	CS2
16	O	HDC	46	I/O	DA7	76	I/O	AD0	106	I	CS1
17	O	ST08	47	I/O	DA6	77	I/O	AD1	107	I	CS0
18	O	DATA	48	I/O	DA5	78	I/O	AD2	108	O	TO02
19	O	DATB	49	I/O	DA4	79	I/O	AD3	109	I	TI03
20	O	DRV	50	I/O	DA3	80	I/O	AD4	110	I	TI04
21	I	TI08	51	I/O	DA2	81	I/O	AD5	111	O	TO03
22	O	TO05	52	I/O	DA1	82	I/O	AD6	112	I	TI05
23	O	TO01	53	I/O	DA0	83	I/O	AD7	113	I	TI06
24	I	TI01	54	I/O	DAF	84	I/O	AD8	114	I	TSNR
25	I	TI02	55	I/O	DAE	85	I/O	AD9	115	I	TWEB
26	O	TO06	56	I/O	DAD	86	I/O	ADA	116	I	TTOE
27	I	TI10	57	I/O	DAC	87	O	OPTW	117	I	TTCS
28	I	TI11	58	I/O	DAB	88	O	OPTO	118	I	CLOK
29	I	TI09	59	I	IOEN	89	I	OLD	119	O	OSO
30	-	VDD	60	-	GND	90	-	VDD	120	-	GND

HD6475328F-FMY10-01 (HITACHI) FLAT PACKAGE
HD6475368F-FMY13-01 (HITACHI) FLAT PACKAGE

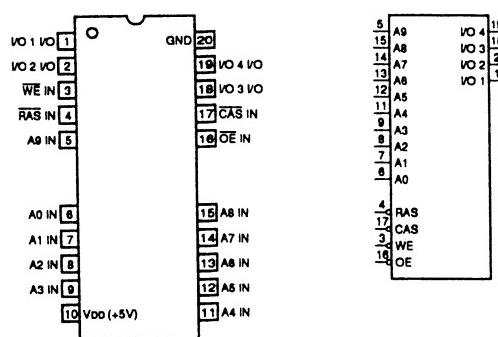
C-MOS MICRO COMPUTER UNIT
-TOP VIEW-



INPUT			4	P24/WR	P17/MO	79
AGND	:	QND FOR A/D CONVERTER	3	P23/RD	P16/IQ1	78
AN0-AN7	:	ANALOG	2	P22/DS	P15/IQ2	77
AVDD	:	REFERENCE VOLTAGE FOR A/D CONVERTER	1	P21/RW	P14/WAIT	76
BREQ	:	BAS REQUEST	80	P20/AS	P13/BREQ	74
EXTAL	:	CRYSTAL OSCILLATOR & EXTERNAL CLOCK (# CLOCK x 2)			P12/BACK	74
FTCI1-FTCI3	:	FRT COUNTER CLOCK			P11/E	73
FTI1-FTI3	:	FRT INPUT CAPTURE			P10/F	72
IRQ0,IRQ1	:	INTERRUPT REQUEST	28	P47/A7	P37/D7	19
MDO-MD2	:	MODE SETTING	27	P48/A8	P36/D8	18
NMI	:	NON-MASKABLE INTERRUPT	26	P45/A5	P35/D5	17
P60-P67	:	PORT 8	25	P44/A4	P34/D4	16
RES	:	RESET	24	P43/A3	P33/D3	15
RXD	:	RECEIVE DATA	23	P42/A2	P32/D2	14
SBTBY	:	STANDBY	22	P41/A1	P31/D1	13
TMC1	:	8-BIT TIMER CLOCK	21	P40/A0	P30/D0	13
TMRI	:	8-BIT TIMER COUNTER RESET				
WAIT	:	WAIT	41	P83/A19	P57/A15	37
XTAL	:	CRYSTAL OSCILLATOR (# CLOCK x 2)	40	P82/A18	P56/A14	36
OUTPUT			39	P81/A17	P55/A13	35
#	:	SYSTEM CLOCK	38	P80/A16	P54/A13	34
A0-A19	:	ADDRESS BUS			P53/A11	33
A5	:	ADDRESS STROBE			P52/A10	32
BACK	:	BAS REQUEST ACKNOWLEDGE			P51/A9	31
D8	:	DATA STROBE			P50/A8	30
E	:	ENABLE CLOCK	59	P87/AN7	P77/FTOA1	50
FTOA1-FTOA3	:	FRT OUTPUT COMPEA A	58	P86/AN6	P76/FTOB3/FTC13	49
FTOB1-FTOB3	:	FRT OUTPUT COMPEA B	57	P85/AN5	P75/FTOB2/FTC12	47
PW1-PW3	:	PWM TIME	56	P84/AN4	P74/FTOB1/FTC11	46
RD	:	READ	55	P83/AN3	P73/FT19/TMR1	45
R/W	:	READ/WRITE	54	P82/AN2	P72/FT12	45
TMO	:	8-BIT TIMER	53	P81/AN1	P71/FT11	44
TXD	:	TRANSCIEVE DATA	52	P80/AN0	P70/FT10	43
WR	:	WRITE				
INPUT/OUTPUT			69	EXTAL	P97/CLK	68
D0-D7	:	DATA BUS	70	XTAL	P98/RDX	67
P10-P17	:	PORT 1			P95/TDX	65
P20-P24	:	PORT 2	10	RES	P94/PW3	65
P30-P37	:	PORT 3	9	SBTBY	P93/PW2	64
P40-P47	:	PORT 4	8	M00	P92/PW1	63
P50-P57	:	PORT 5	7	M01	P91/FTOA3	62
P60-P63	:	PORT 6	6	M02	P90/FTOA2	61
P70-P77	:	PORT 7	11	NMI		
P90-P97	:	PORT 8				
SCK	:	SERIAL CLOCK	60	AVDD		
			51	AGND		

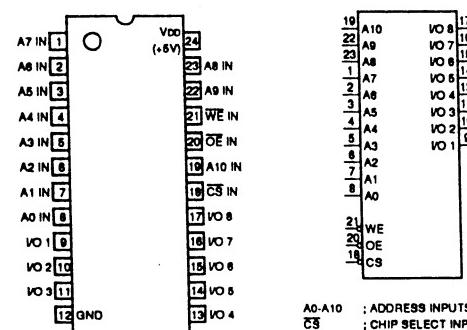


HM51L240AS7 (HITACHI)
C-MOS 2M (524,288 x 4)-BIT DYNAMIC RAM
-TOP VIEW-



A0-A9 : ADDRESS INPUTS
CAS : COLUMN ADDRESS STROBE INPUT
IO 1-IO 4 : DATA INPUTS/OUTPUTS
OE : OUTPUT ENABLE INPUT
RAS : ROW ADDRESS STROBE INPUT
WE : WRITE ENABLE INPUT

IDT6116SA25S0 (IDT) FLAT PACKAGE
C-MOS 16K (2K x 8)-BIT STATIC RAM
-TOP VIEW-

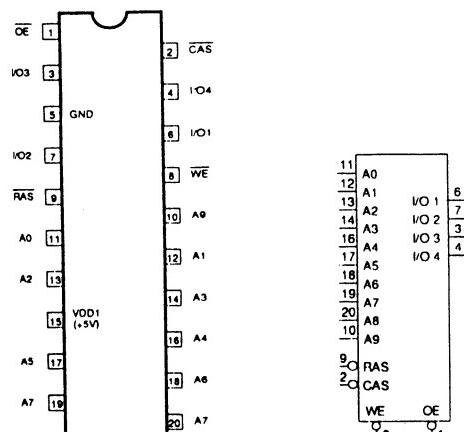


A0-A10 : ADDRESS INPUTS
CS : CHIP SELECT INPUT
IO1-IO8 : DATA INPUTS/OUTPUTS
OE : OUTPUT ENABLE INPUT
WE : WRITE ENABLE INPUT

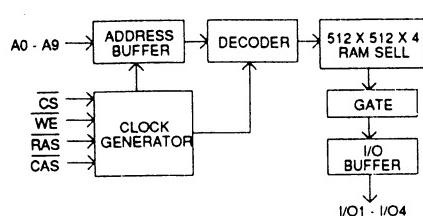
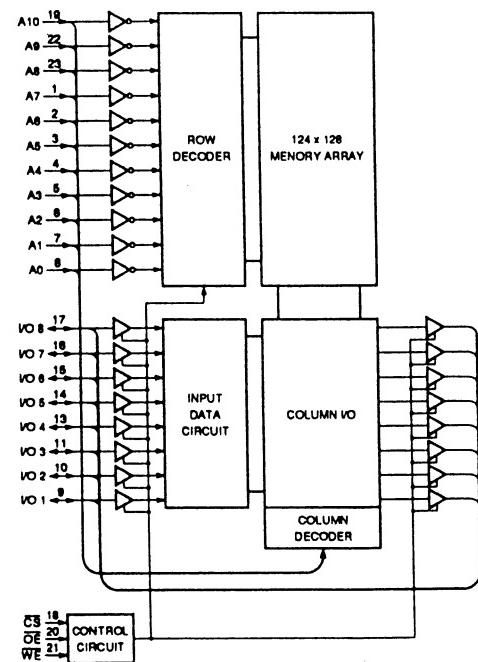
MODE	CS	OE	WE	VO
STANDBY	1	X	X	HI-Z
READ	0	0	1	DATA OUT
READ	0	1	1	HI-Z
WRITE	0	X	0	DATA IN

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE

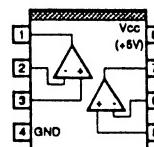
HM514400AS7GS-EL (HITACHI)
C-MOS 4 BIT DYNAMIC RAM
- TOP VIEW -

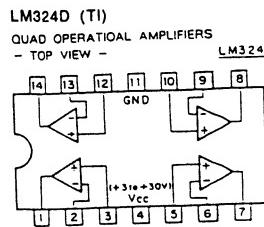


A0 - A9 : ADDRESS INPUT
CAS : COLUMN ADDRESS STROBE
I/O 1 - I/O 4 : DATA INPUT/OUTPUT
RAS : ROW ADDRESS STROBE
OE : OUTPUT ENABLE INPUT
WE : WRITE ENABLE INPUT

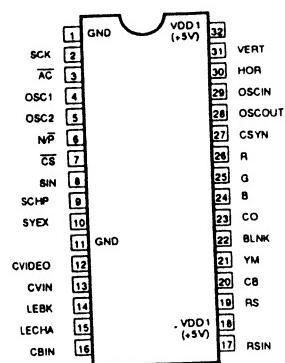


LM358D (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIERS
-TOP VIEW-

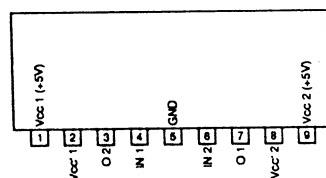




M50555-218FP
C-MOS TV DISPLAY CONTROLLER
— TOP VIEW —



M54544AL (MITSUBISHI)
BI-DIRECTIONAL MOTOR DRIVER WITH THERMAL SHUT DOWN FUNCTION
— PRINTED SIDE VIEW —



Vcc' 1, Vcc' 2; POWER SOURCE OUTPUT

INPUT	OUTPUT		FUNCTION
	IN 1	IN 2	
0	0		'OFF' STATE
1	0	1	0
0	1	0	1
1	1	0	0

0 : LOW LEVEL
1 : HIGH LEVEL

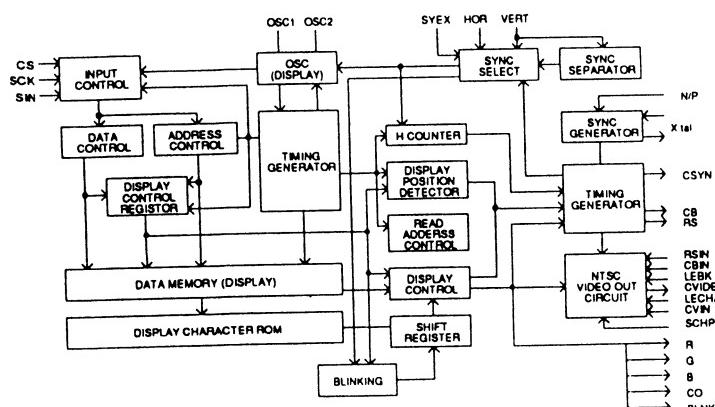
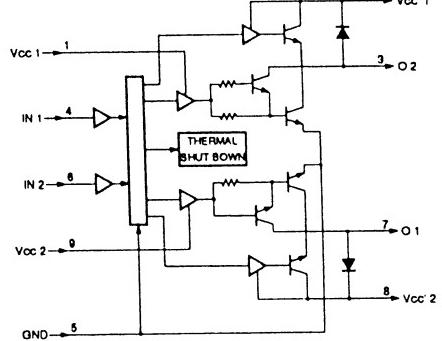
IC PASSIVITY

POSITIVE ROTATING

NEGATIVE ROTATING

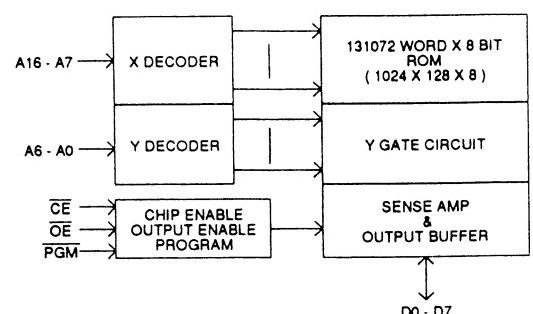
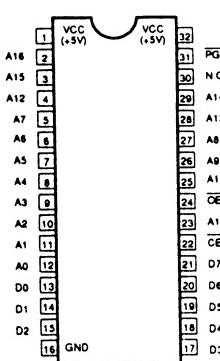
BRAKE

0 : LOW LEVEL
1 : HIGH LEVEL



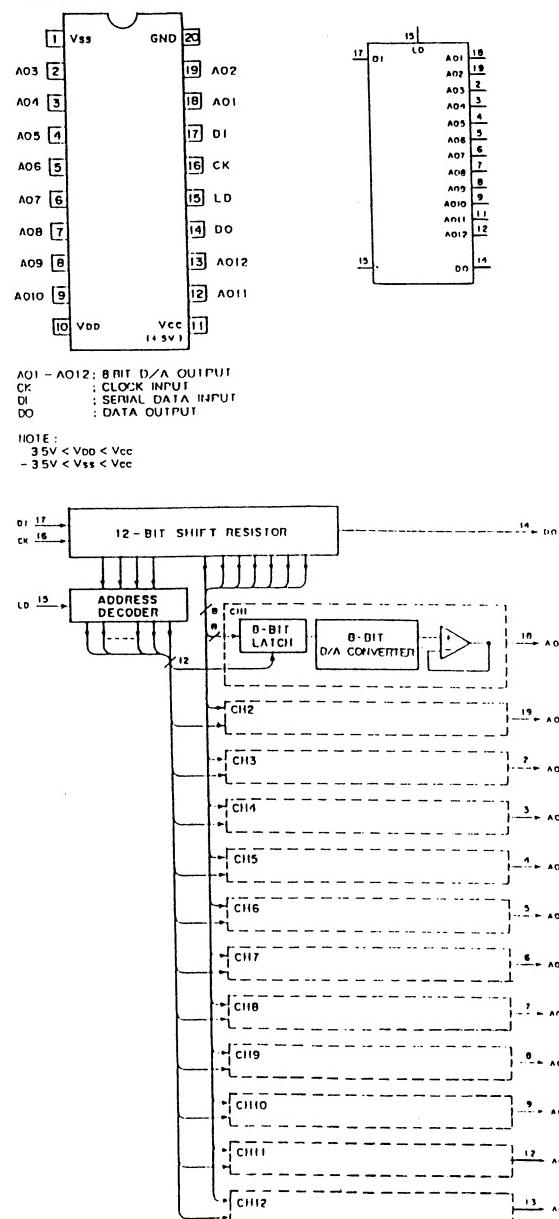
**M5M27C101FP-UP12G-E2
M5M27C101FP-UP12M-E2
M5M27C101FP-UP12S-E2**
C-MOS ONE TIME PROGRAMMABLE ROM

— TOP VIEW —



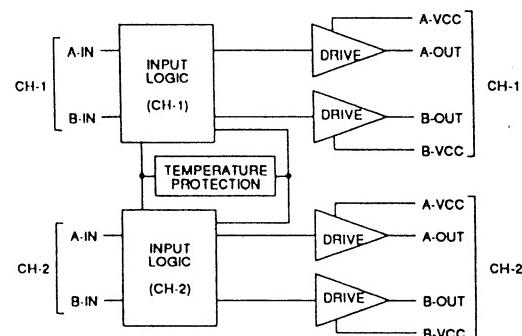
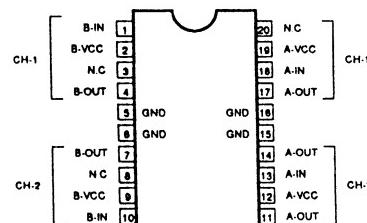
M62352GP (MITSUBISHI) FLAT PACKAGE
CMOS 8BITx12 CHANNEL D/A CONVERTER
(WITH BUFFER OPERATIONAL AMPLIFIER)

- TOP VIEW -



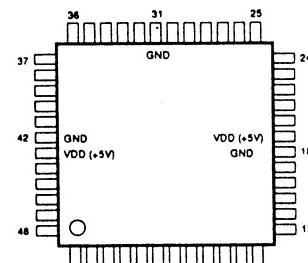
MB3863PF-G-BND
DUAL MODE MOTOR DRIVER

- TOP VIEW -



MB621948
C-MOS GATE ARRAY

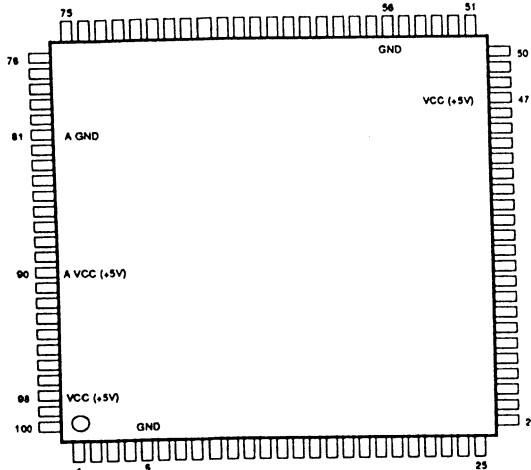
- TOP VIEW -



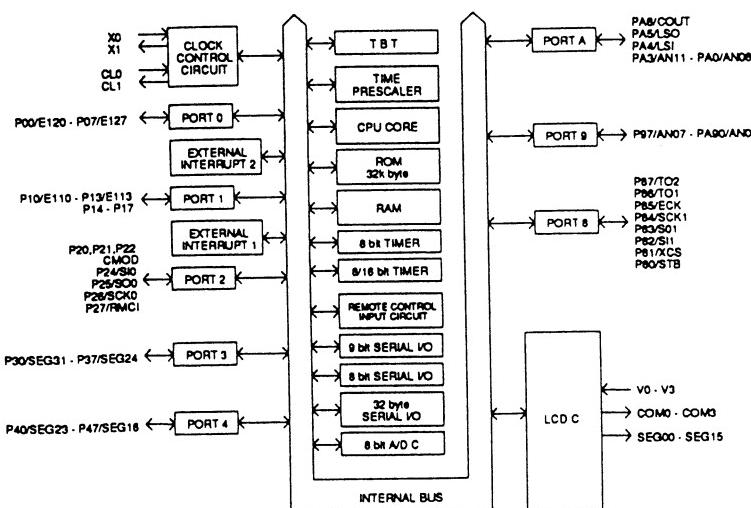
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	CBLANK	13	I	SYNC2	25	O	HPWO	37	I	NAND12
2	I	HD	14	I	SYDL0	26	O	HPWON	38	O	NAND0
3	I	VD	15	I	SYDL1	27	O	WIN	39	I	VDSEL
4	I	SYNC1	16	I	SYDL2	28	O	WINN	40	I	INTVD
5	I	CLK	17	I	SYDL3	29	O	CP	41	I	EXTVD
6	-	GND	18	-	GND	30	O	CPON	42	-	GND
7	I	NTSCPAL	19	-	VDD (+5V)	31	-	GND	43	-	VDD (-5V)
8	I	RESET	20	I	BLDL0	32	O	DLBLKO	44	O	VSELOUT
9	I	HPPD0	21	I	BLDL1	33	O	DLBLON	45	I	DLSEL0
10	I	HPPD1	22	I	BLDL2	34	O	DLSYO	46	I	DLSEL1
11	I	HPPD2	23	I	BLDL3	35	O	DLSYON	47	I	THDL
12	I	HPPD3	24	I	TEST	36	I	NAND11	48	I	TESTHPWO

MB89093PFV-G-124-BND
C-MOS 8 BIT MICROCOMPUTER

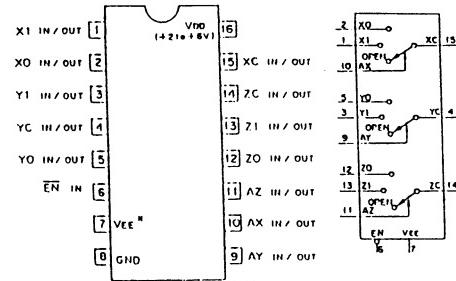
- TOP VIEW -



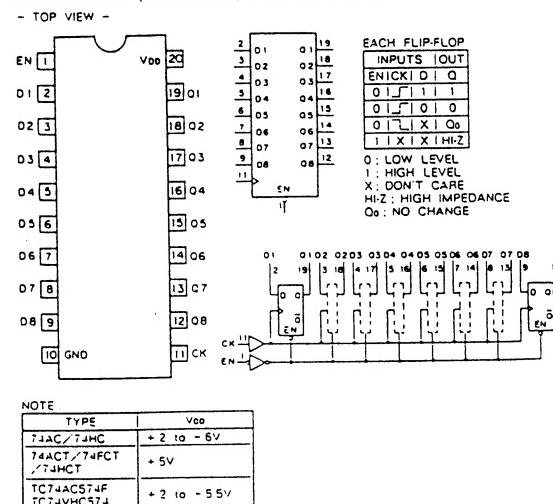
PIN No.	VO	SIGNAL	PIN No.	VO	SIGNAL	PIN No.	VO	SIGNAL	PIN No.	VO	SIGNAL
1	I	MOD0	26	VO	C MOD	51	O	SEG12	76	VO	P83/SO1
2	I	MOD1	27	VO	P24/SIO	52	O	SEG11	77	VO	P84/SCK1
3	I	X0	28	VO	P25/SO0	53	O	SEG10	78	VO	P85/ECK
4	O	X1	29	VO	P26/SCK0	54	O	SEG09	79	VO	P86/T01
5	-	VSS	30	VO	P27/RMC1	55	O	SEG08	80	VO	P87/T02
6	I	X RST	31	VO	P30/SEG31	56	-	VSS	81	-	A VSS
7	VO	P00/E120	32	VO	P31/SEG30	57	O	SEG07	82	VO	P80/AN00
8	VO	P01/E121	33	VO	P32/SEG29	58	O	SEG06	83	VO	P81/AN01
9	VO	P02/E122	34	VO	P33/SEG28	59	O	SEG05	84	VO	P82/AN02
10	VO	P03/E123	35	VO	P34/SEG27	60	O	SEG04	85	VO	P83/AN03
11	VO	P04/E124	36	VO	P35/SEG26	61	O	SEG03	86	VO	P84/AN04
12	VO	P05/E125	37	VO	P36/SEG25	62	O	SEG02	87	VO	P85/AN05
13	VO	P06/E126	38	VO	P37/SEG24	63	O	SEG01	88	VO	P86/AN06
14	VO	P07/E127	39	VO	P40/SEG22	64	O	SEG00	89	VO	P87/AN07
15	VO	P10/E110	40	VO	P41/SEG22	65	I	V3	90	-	VCC (+5V)
16	VO	P11/E111	41	VO	P42/SEG21	66	I	V2	91	VO	P80/AN08
17	VO	P12/E112	42	VO	P43/SEG20	67	I	V1	92	VO	P81/AN09
18	VO	P13/E113	43	VO	P44/SEG19	68	I	V0	93	VO	P82/AN10
19	VO	P14	44	VO	P45/SEG18	69	O	COM0	94	VO	P83/AN11
20	VO	P15	45	VO	P46/SEG17	70	O	COM1	95	VO	P84/LSI
21	VO	P16	46	VO	P47/SEG16	71	O	COM2	96	VO	P85/LSO
22	VO	P17	47	-	VCC (+5V)	72	O	COM3	97	VO	P86/COUT
23	VO	P20	48	O	SEG15	73	VO	P80/STB	98	-	VCC (+5V)
24	VO	P21	49	O	SEG14	74	VO	P81/XCS	99	O	CL1
25	VO	P22	50	O	SEG13	75	VO	P82/S11	100	I	CL0



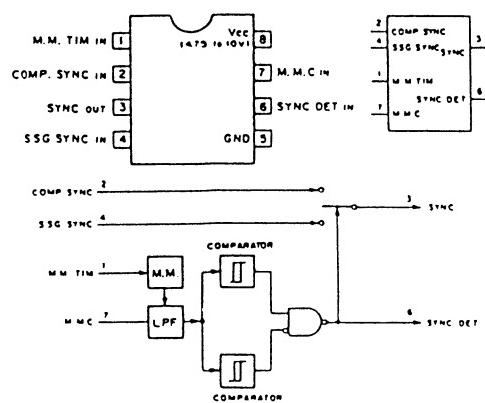
MC74HC4053F (MOTOROLA) FLAT PACKAGE
CMOS TRIPLE 2 CHANNEL ANALOG MULTIPLEXER/DEMULITPLEXER
- TOP VIEW -



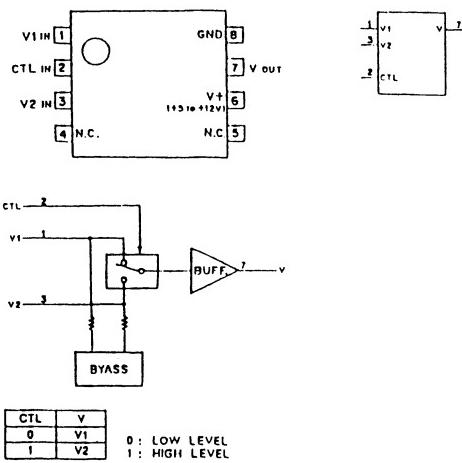
MC74HC574AF (MOTOROLA) FLAT PACKAGE



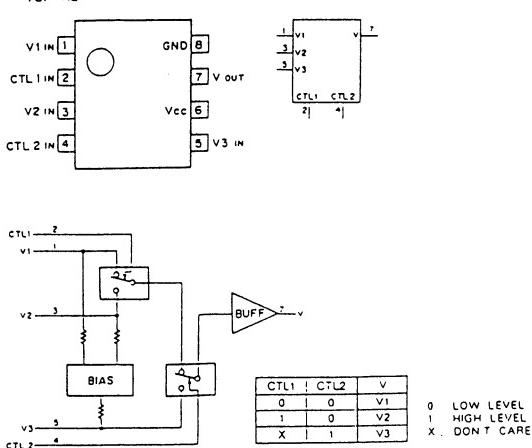
NJM2230M (JRC) FLAT PACKAGE
VIDEO SIGNAL DETECTOR
- TOP VIEW -



NJM2233BM (JRC) FLAT PACKAGE
2 INPUT SIGNAL VIDEO SWITCH
- TOP VIEW -

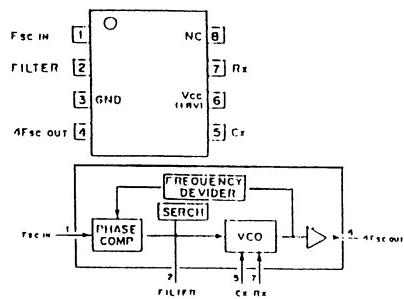


NJM2234M (JRC) FLAT PACKAGE
3 INPUT VIDEO SIGNAL SWITCH
- TOP VIEW -

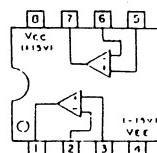


TYPE	GAIN	Vcc
NJM2234M	0 dB	+5 to +12V
NJM2245M	+6 dB	+8.5 to +13V

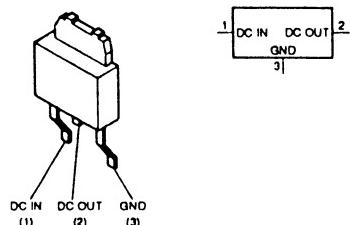
NJM2240M (JRC) FLAT PACKAGE
4-TIMES OSCILLATOR
- TOP VIEW -



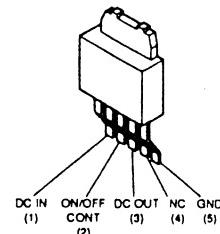
NJM4560M (JRC) FLAT PACKAGE
DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -



PQ05SZ1U (SHARP)
SERIES REGULATOR

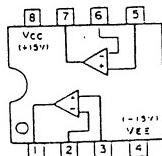


PQ05TZ1U (SHARP)
SERIES REGULATOR



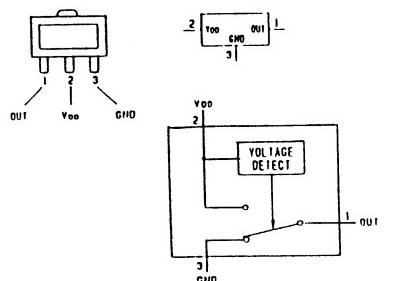
RC4558PS (TI) FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -



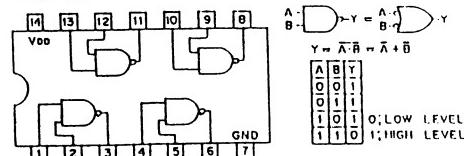
S-8054ALB-LM-S (SEKIO I AND E) 4.00-4.30V

C-MOS VOLTAGE DETECTOR
- TOP VIEW -



SN74HC00ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT NAND GATE
- TOP VIEW -

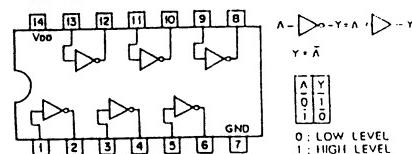


NOTE:

TYPE	V _{DD}
TC74AC00P	+2 to +5V
TC74AC00F	+5V
MC741IC100N	+5V
74ACT00PC	+2 to +6V
OTHER TYPES	+2 to +6V

SN74HC04ANS (TI) FLAT PACKAGE

C-MOS HEX INVERTERS
- TOP VIEW -

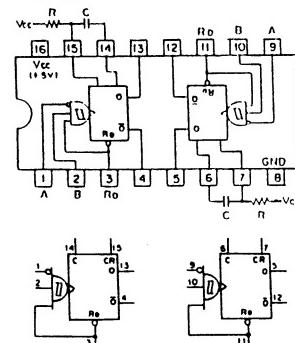


NOTE:

TYPE	V _{DD}
74HC104 TYPE	+5V
74VHC	+2 to +5.5V
TC74AC04 TYPE	+4.5 to +5.5V
74ACT04 TYPE	+2 to +6V
OTHER TYPES	+2 to +6V

SN74LS221NS (TI) FLAT PACKAGE

TIL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
- TOP VIEW -

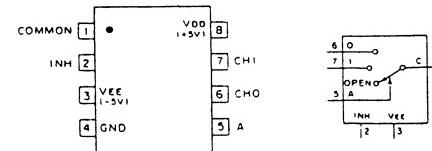


INPUTS	OUTPUTS
R _d A B	0 0 0
0 X X	0 1
X 1 X	0 1
X X O	0 1
1 0 1	1 1
1 1 1	1 1
1 0 1	X

O: LOW LEVEL
1: HIGH LEVEL
X: DONT CARE
OUTPUT PULSE WIDTH = 0.7CR

TC4W53F (TOSHIBA) FLAT PACKAGE

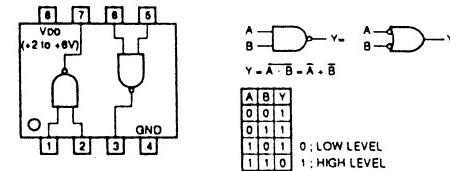
C-MOS 2 CHANNEL MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -



CONT.	INPUT	ON CHANNEL
INH.	A	0
0	0	0
0	1	1
1	X	OPEN

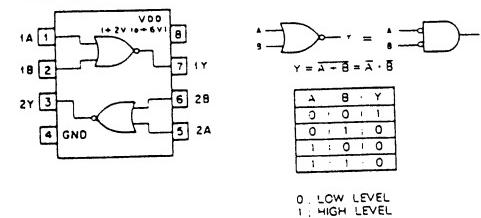
TC7W00F (TOSHIBA) FLAT PACKAGE

C-MOS DUAL 2-INPUT NAND GATE
- TOP VIEW -

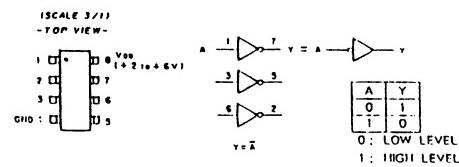


TC7W02F (TOSHIBA) FLAT PACKAGE

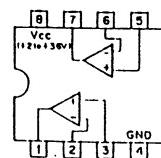
C-MOS DUAL 2-INPUT NOR GATE
- TOP VIEW -



TC7WU04F (TOSHIBA) CHIP PACKAGE
CMOS HEX INVERTERS

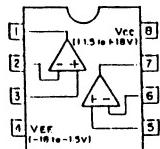


UPC393G2 (NEC) FLAT PACKAGE
DUAL VOLTAGE COMPARATORS
TOP VIEW -

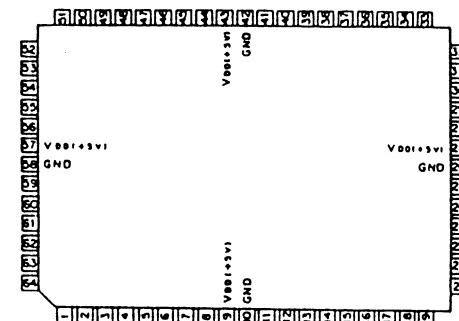


TL082CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(JFET INPUT)

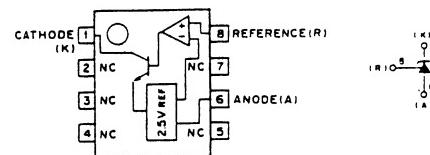
- TOP VIEW -



UPD65006GF-250-3B8 (NEC)
C-MOS
TOP VIEW -

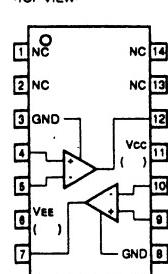


TL431CM (TI) FLAT PACKAGE
PROGRAMMABLE SHUNT REGULATOR DIODE



PIN NO.	PIN NAME						
1		17	P8	33		49	INT VO
2		18	P9	34		50	
3	WEHO HOL	19	P10	35	HDL7	51	
4	SWD HOL	20	CAS1	36	HDL6	52	INT HD
5	SWD VD	21	CAS2	37	HDL5	53	INT SYNE
6	VBLK	22	CUP	38	HDL4	54	SWD HD
7	PO	23	VBLK	39	HDL3	55	WDM SYNC
8	P1	24	AEN	40	HDL2	56	SIG DEF
9	VDD	25	IN/M	41	HDL1	57	VDD
10	GND	26	GND	42	GND	58	GND
11	P2	27	VDD	43	VDD	59	HD
12	P3	28	HD RET	44	D/CLK	60	SYNC
13	P4	29	HD OUT	45	RAS	61	VO
14	P5	30	RES	46	CK	62	TRIG
15	P6	31	HDL9	47	EXT D/A	63	TRG/FPG
16	P7	32	HDL8	48	INT D/A	64	IN/MEM

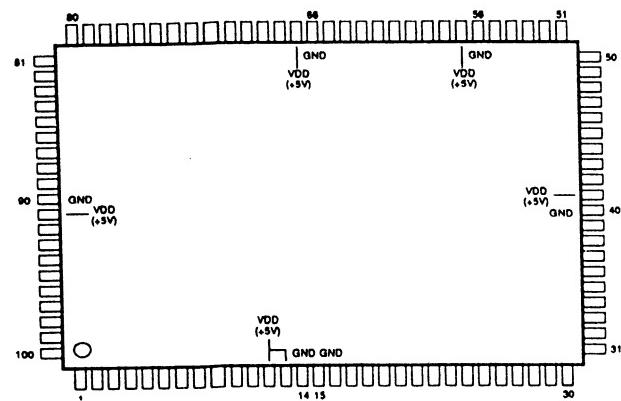
UPC319G2 (NEC) FLAT PACKAGE
DUAL VOLTAGE COMPARATOR
TOP VIEW.



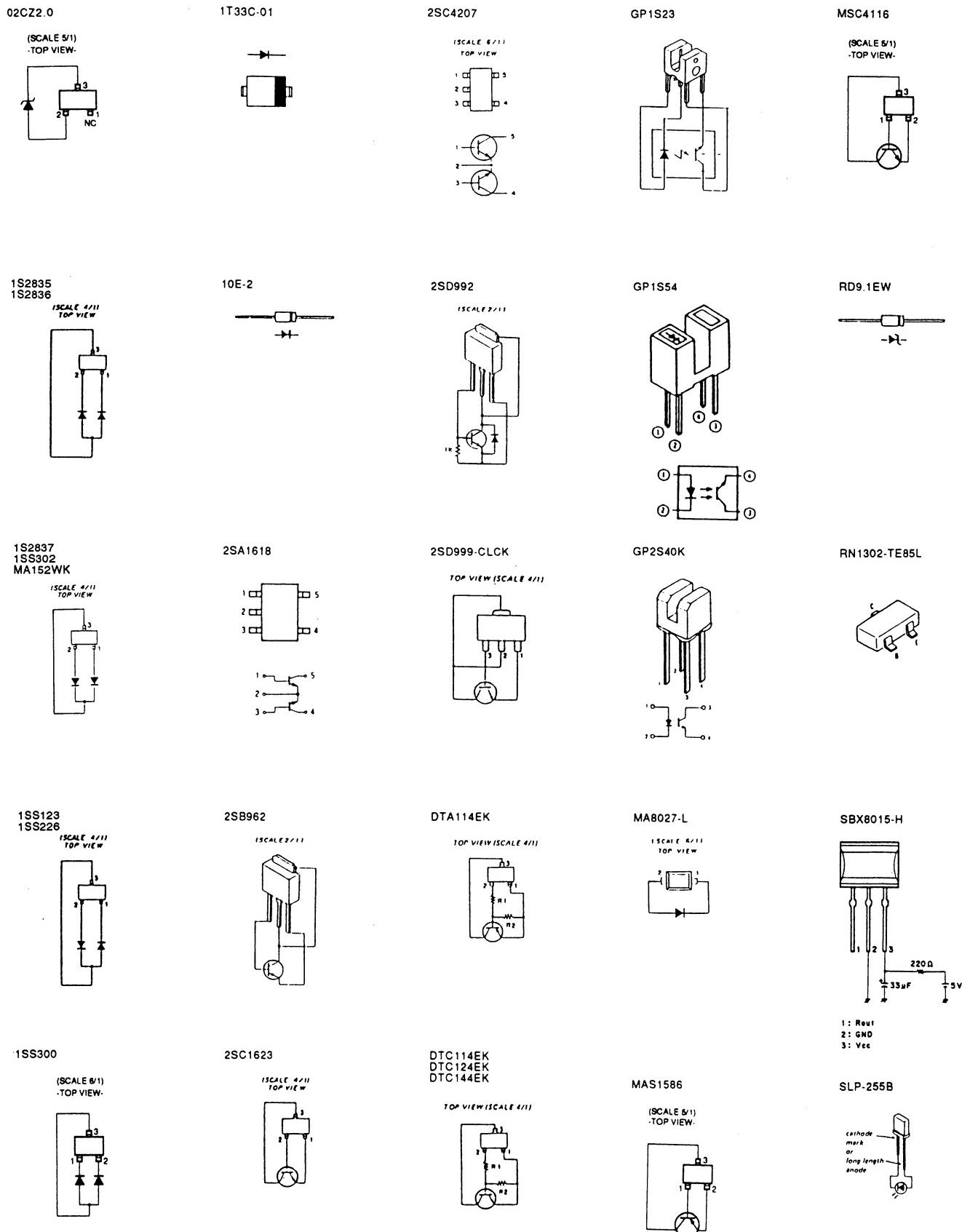
UPD65013GF-407-3BA

C-MOS GATE ARRAY

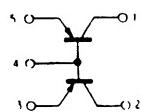
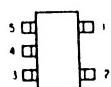
- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1		CS10	26		CAS2	51		A0	76		G2BE
2		CS00	27		CAS1	52		A1	77		G1AE
3		MFY3	28		CAS0	53		A2	78		G1BE
4		MY3	29		RAS9	54		A3	79		G1AW
5		MY2	30		RAS8	55		A4	80		G1BW
6		MY1	31		RAS7	56		GND	81		R2AW
7		MY0	32		RAS6	57	VDD (+5V)		82		R2BW
8		Y3	33		RAS5	58		A5	83		R2AE
9		Y2	34		RAS4	59		A6	84		R2BE
10		Y1	35		RAS3	60		A7	85		R1AE
11		Y0	36		RAS2	61		A8	86		R1BE
12		VDD (+5V)	37		RAS1	62		A9	87		R1AW
13		VDD (+5V)	38		RAS0	63	B2BW		88		R1BW
14		GND	39		CAS5	64	B2AE		89		INMB
15		GND	40		GND	65	B2AW		90		GND
16		CS2B	41		VDD (+5V)	66		GND	91	VDD (+5V)	
17		CR8	42		CAS6	67	VDD (+5V)		92		AEN
18		CS1B	43		CAS7	68	B2BE		93		HBL
19		BC8B	44		CAS8	69	B1AE		94		VBL
20		BCGB	45		ABRB	70	B1BE		95		CUP
21		BCRB	46		CAS9	71	B1AW		96		CRY
22		MGRW	47		CS0	72	B1BW		97		CS4
23		FTH8	48		CS1	73	G2AW		98		CS4O
24		CAS4	49		CS2	74	G2BW		99		CS3O
25		CAS3	50		CS3	75	G2AE		100		CS2O

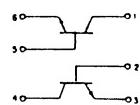


XN2401

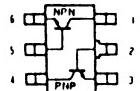


XN4501

SCALE 6/11
TOP VIEW



XN4601



SECTION 5

EXPLODED VIEWS

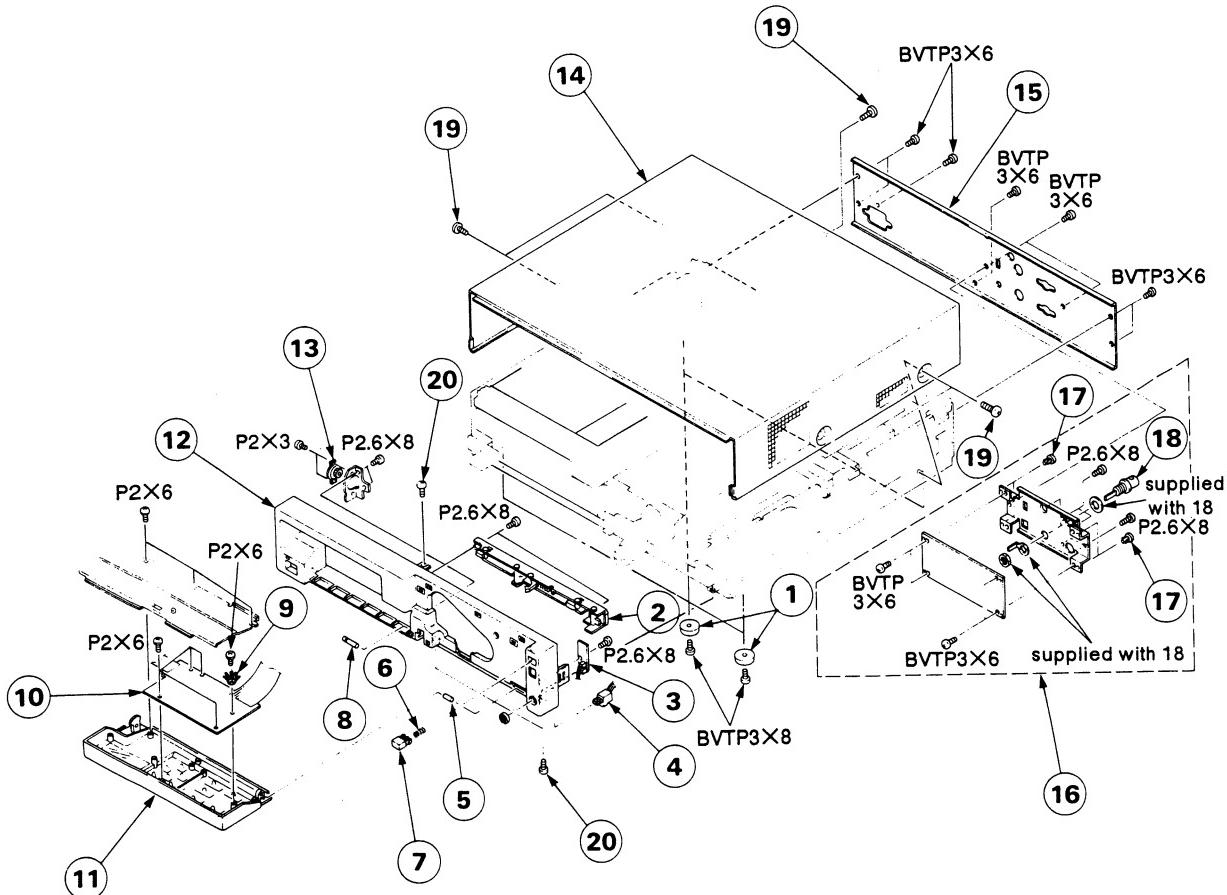
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

• Items marked " * " are not stocked because they are seldom required for routine servicing. Some delay should be expected when ordering these items.

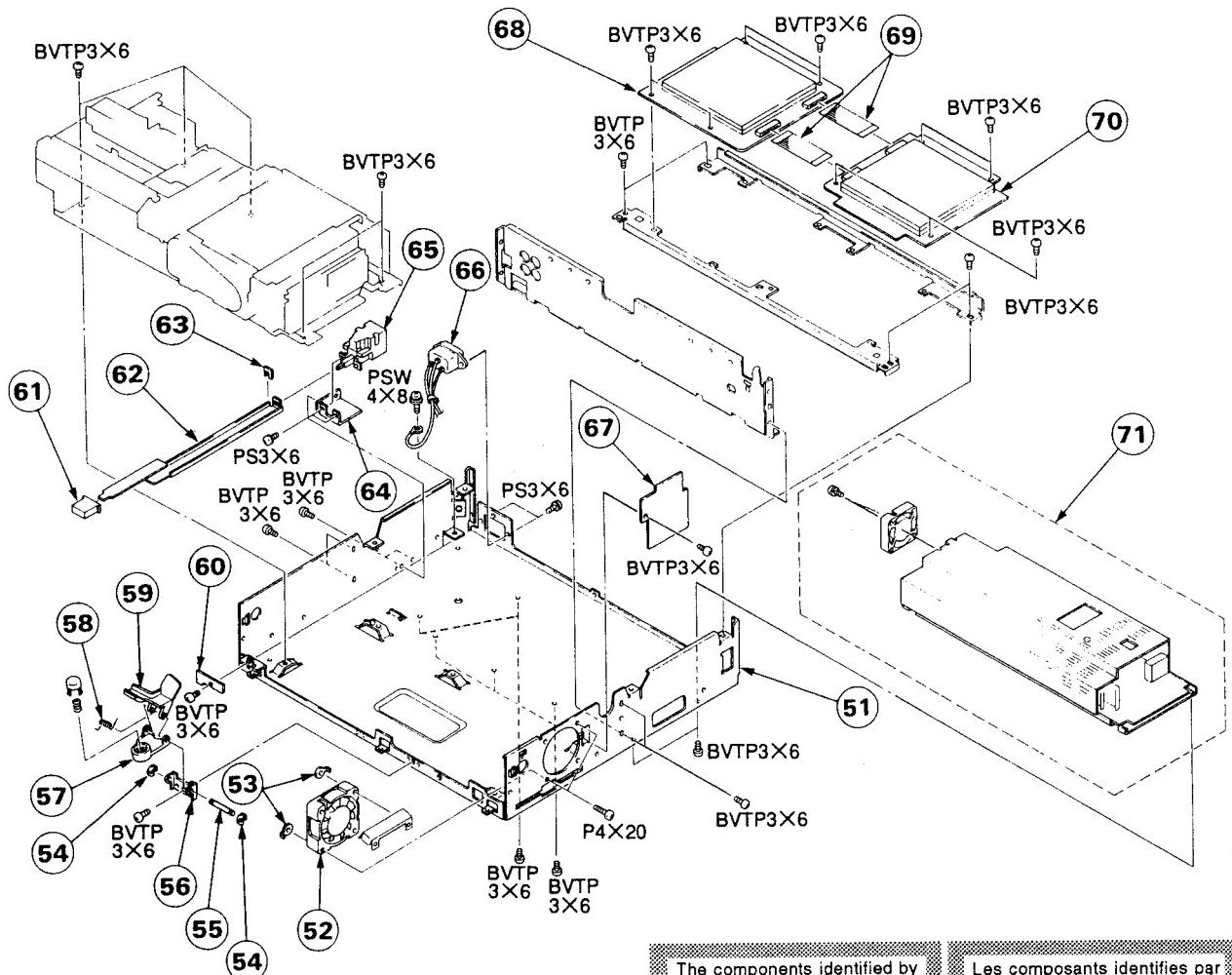
The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. CABINET ASSEMBLY

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
1	X-4816-109-1	FOOT ASSY, MINI		11	X-3167-716-1	PANEL SUB ASSY, DOOR (UP-1200A)	
2	A-8267-875-C	CLOSE ASSY, DOOR OPEN		12	X-3167-717-1	PANEL SUB ASSY, DOOR (UP-1200AEPM)	
3	*A-8275-451-A	PTC-27 BOARD, COMPLETE		13	3-712-786-21	DUMPER, OIL	
4	1-507-195-21	SPECIAL REMOTE CONTROL JACK		14	*3-183-254-02	COVER, TOP	
5	3-183-189-01	SHAFT (R), DOOR FULCRUM		15	*3-183-247-03	PANEL, REAR (VIDEO) (UP-1200A)	
6	3-183-581-02	SPRING, COMPRESSION COIL		16	*3-183-247-13	PANEL, REAR (VIDEO) (UP-1200AEPM)	
7	3-183-186-03	BUTTON, OPEN		17	*A-8275-446-B	IF-27 BOARD, COMPLETE	
8	3-183-188-01	SHAFT (L), DOOR FULCRUM		18	3-531-576-11	RIVET, NYLON	
9	3-183-656-01	SPRING (KY), PLATE		19	1-562-261-41	CONNECTOR, COAXIAL (BNC)	
10	1-692-855-22	KEYBOARD, FFC WITH		20	3-733-690-01	+B 4X6 (CU, N1)	
					3-184-595-01	SCREW 3X8	

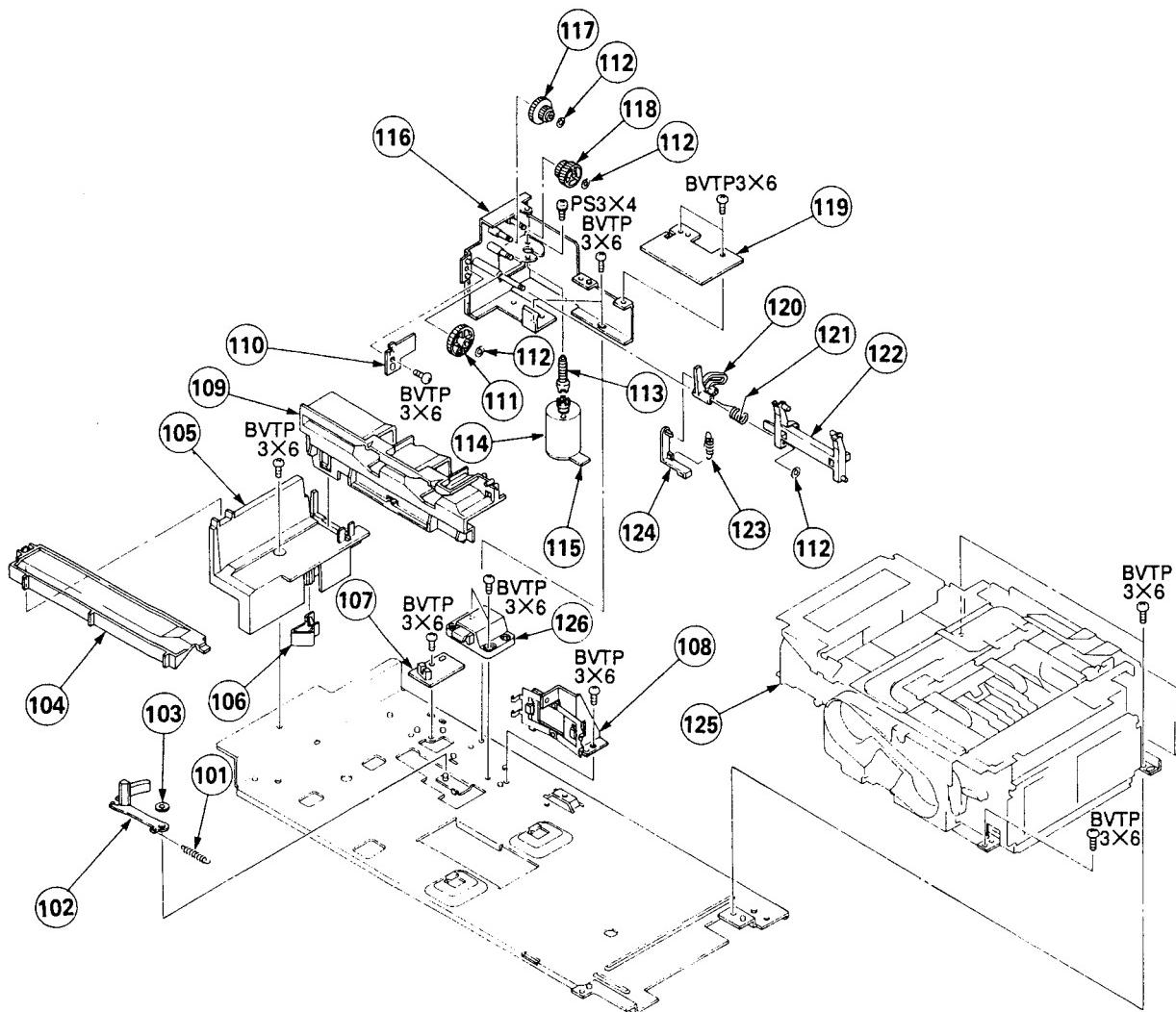
5-2. CHASSIS ASSEMBLY(1)



Ref. No	Part No.	Description	Remark
51	*3-183-255-03	CHASSIS	
52	1-541-684-42	MOTOR, DC	
53	3-534-233-00	NUT, ADJUSTMENT	
54	4-926-219-02	RING (DIA. 2.3), RETAINING	
55	3-183-200-01	SHAFT, RIBBON PUSH	
56	3-183-187-01	PLATE, FULCRUM	
57	3-183-239-02	PLATE PUSH RIBBON	
58	3-183-183-02	SPRING, TORSION	
59	3-183-238-01	DISCHARGE PLATE, RIBBON	
60	*A-8275-437-A	S-25 BOARD, COMPLETE	
61	2-431-568-31	BUTTON, POWER	
62	*3-183-226-01	ROD, SWITCH	

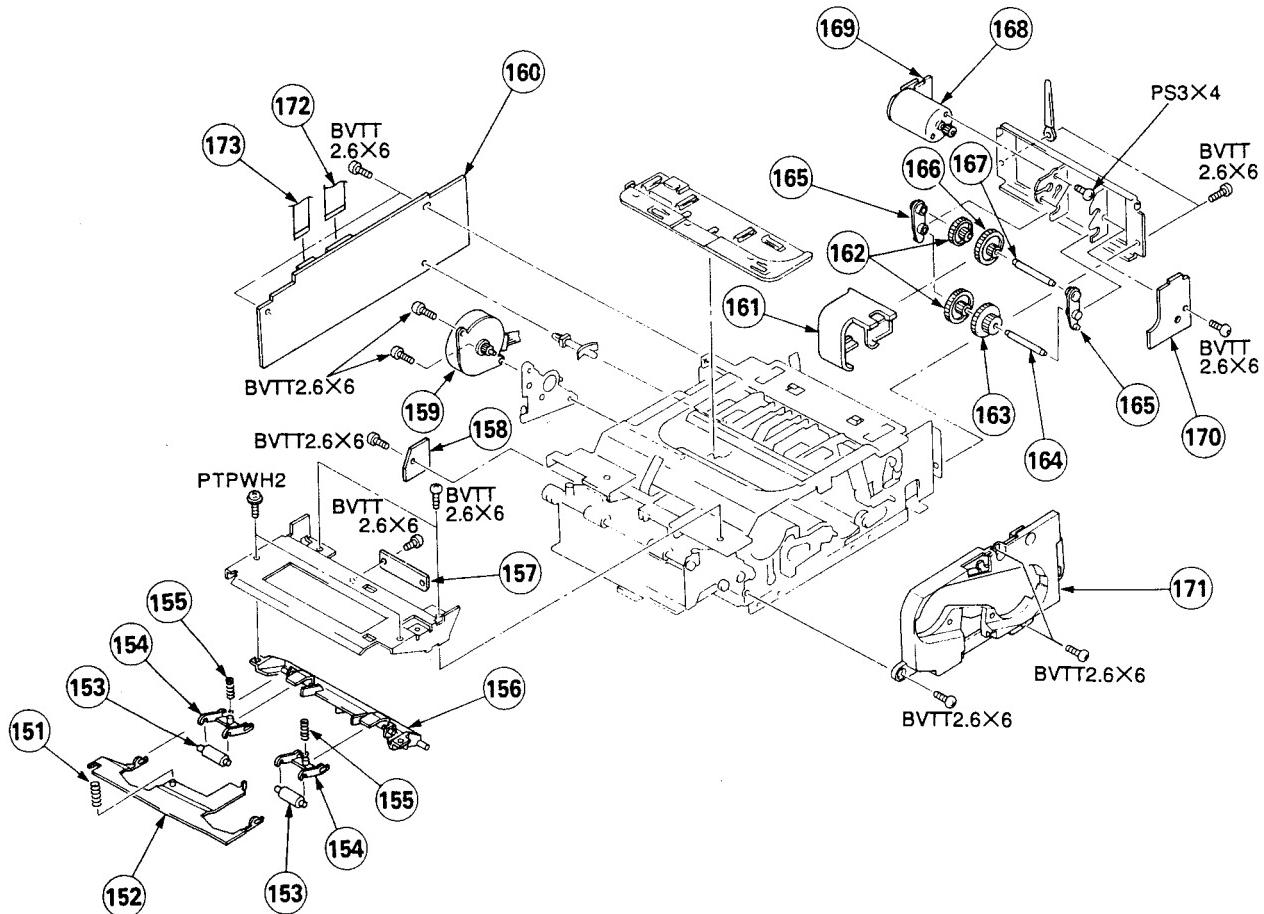
Ref. No	Part No.	Description	Remark
63	3-725-616-01	STOPPER, ROD	
64	*3-183-178-01	BRACKET, SWITCH	
65	Δ 1-554-880-11	SWITCH, PUSH (AC POWER) (1 KEY)	
66	Δ 1-580-375-11	INLET 3P	
67	*A-8275-438-A	KY-15 BOARD, COMPLETE	
68	*A-8274-829-A	FMY-13 BOARD, COMPLETE (UP-1200A)	
	*A-8274-822-A	FMY-13P BOARD, COMPLETE (UP-1200AEPM)	
69	1-751-235-11	CABLE, FLAT (FVM-2)	
70	*A-8274-827-A	VA-76 BOARD, COMPLETE (UP-1200A)	
	*A-8274-835-A	VA-76(B) BOARD, COMPLETE (UP-1200AEPM)	
71	Δ *1-413-942-21	SWITCHING REGULATOR (UP-1200A)	
	Δ *1-413-946-21	SWITCHING REGULATOR (UP-1200AEPM)	

5-3. CHASSIS ASSEMBLY(2)



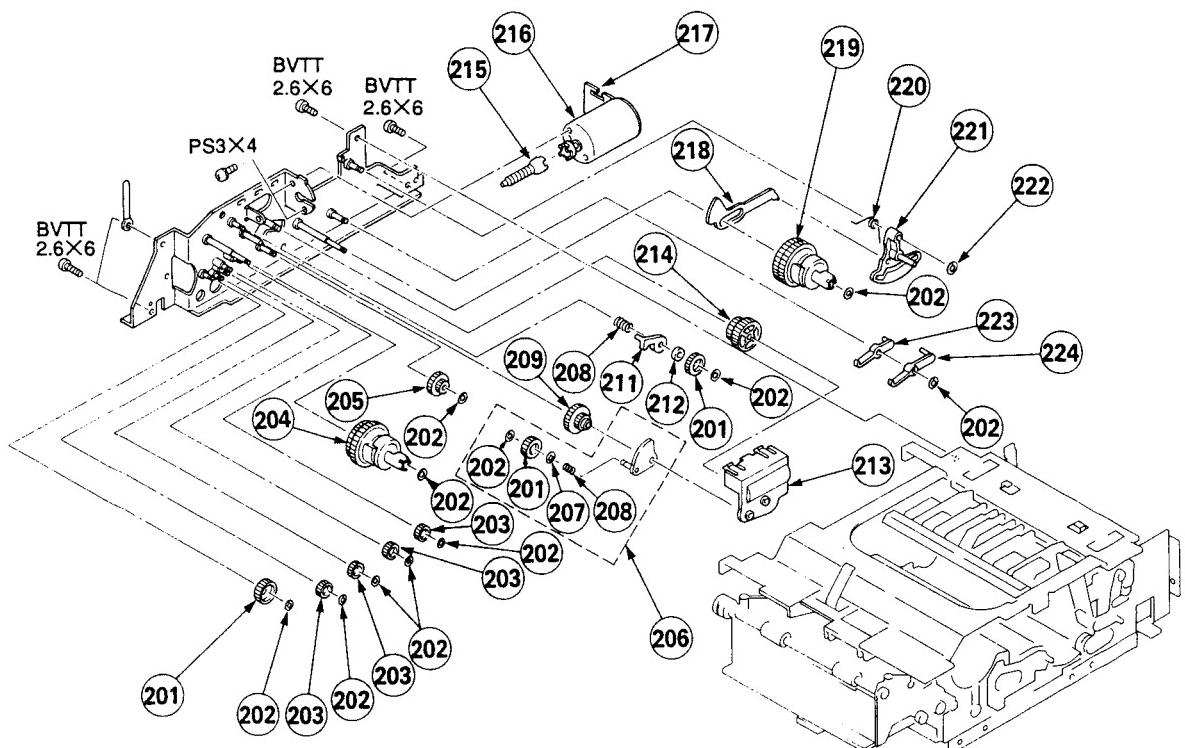
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-183-184-01	SPRING, EXTENSION		115	*1-650-853-14	SU-10 BOARD	
102	3-183-605-02	LEVER, PAPER SENSOR		116	X-3167-308-4	SUB ASSY, MOTOR BRACKET	
103	3-325-697-01	WASHER		117	3-950-040-01	GEAR (2), RD	
104	3-183-240-03	GUIDE, EXIT		118	3-950-039-01	GEAR (1), RD	
105	3-183-253-01	GUIDE, TRAY		119	*A-8275-445-A	DUS-12 BOARD, COMPLETE	
106	3-183-181-01	SPRING, TRAY		120	3-183-228-02	LINK	
107	*A-8275-444-A	SW-42 BOARD, COMPLETE		121	3-183-218-02	SPRING, TORSION	
108	X-3167-310-2	COUNTREMEASURE ASSY		122	3-183-251-02	ARM	
109	3-183-610-04	COVER		123	3-183-176-01	SPRING, EXTENSION	
110	*A-8275-443-A	SW-39 BOARD, COMPLETE		124	3-183-229-03	LEVER, TRAY LOCK	
111	X-3167-307-1	SUB GEAR ASSY, BOSS		125	*A-8260-909-A	MD (P201) ASSY (UP-1200A)	
112	4-926-219-02	RING (DIA. 2.3), RETAINING		126	*A-8267-804-A	MD (P231) ASSY (UP-1200AEPM)	
113	3-950-038-01	GEAR, WORM			3-183-659-02	LOCK PUSH LATCH	
114	X-3942-172-1	MOTOR ASSY, RIBBON					

5-4. MECHANISM DECK ASSEMBLY(1)



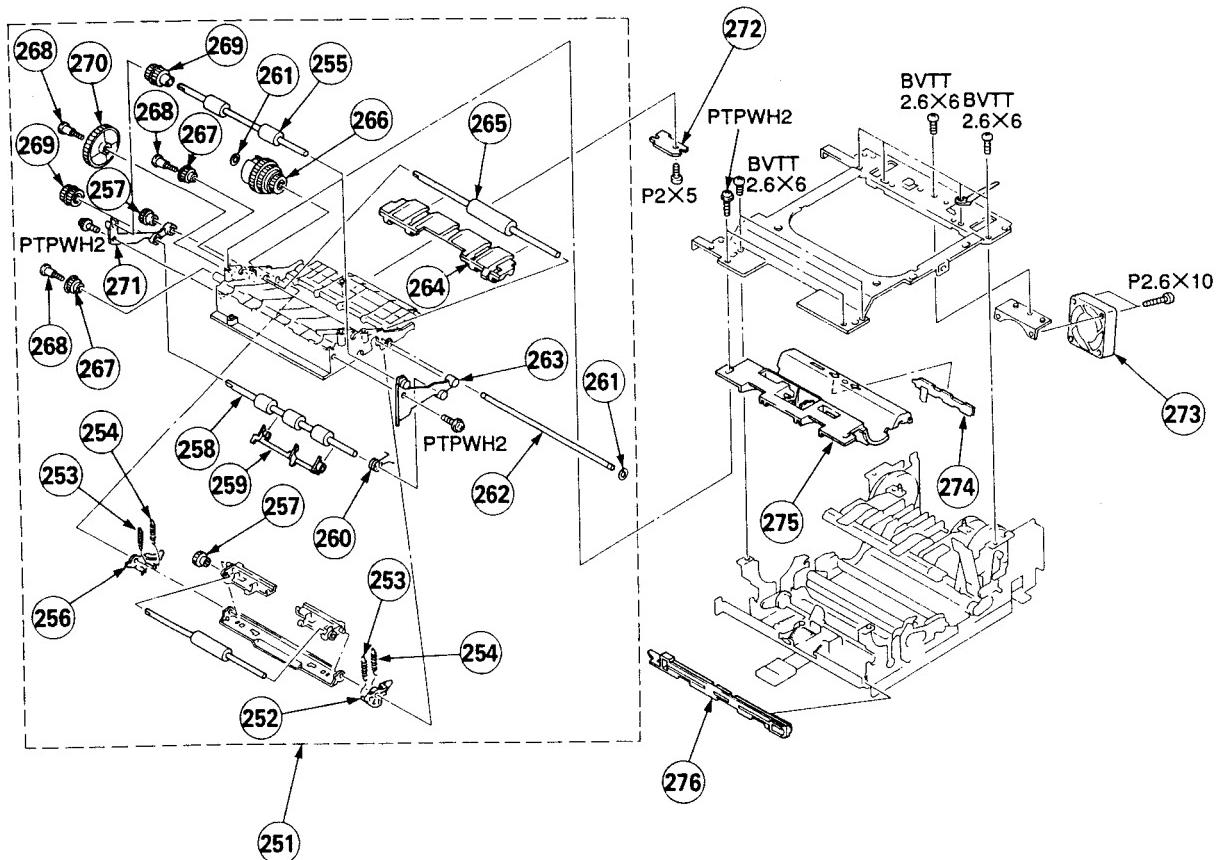
Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
151	3-183-629-01	SPRING, COMPRESSION (PAPER A)		162	3-950-019-01	GEAR (A), HEAD DRIVE	
152	3-183-605-01	SENSOR LEVER		163	3-950-015-01	GEAR (B), HEAD DRIVE	
153	3-950-009-01	ROLLER, PAPER		164	*3-950-020-01	SHAFT, HEAD DRIVE GEAR	
154	3-950-010-01	ARM, PAPER ROLLER		165	*3-950-017-01	HOLDER, HEAD DRIVE GEAR	
155	3-950-013-01	SPRING, COMPRESSION		166	3-956-727-01	GEAR (E), HEAD DRIVE	
156	3-183-609-02	GUIDE, UPPER		167	*3-950-214-01	SHAFT (S), HEAD DRIVE GEAR	
157	*A-8275-442-A	SW-41 BOARD, COMPLETE		168	X-3942-122-1	MOTOR, HEAD DRIVE ASSY	
158	*A-8275-441-A	SW-213 BOARD, COMPLETE		169	*A-8275-435-A	SW-215 BOARD, COMPLETE	
159	X-3942-126-1	MOTOR ASSY, STEPPING		170	*A-8275-436-A	SW-212 BOARD, COMPLETE	
160	*A-8274-824-A	HM-22(L) BOARD, COMPLETE (UP-1200A)		171	X-3167-377-1	GUIDE ASSY, CASSETTE ENTRANCE	
160	*A-8274-819-A	HM-22P(L) BOARD, COMPLETE (UP-1200AEPM)		172	1-765-052-11	WIRE, FLAT TYPE (16 CORE)	
161	*3-952-505-01	GUARD, HEAD GEAR		173	1-765-051-11	WIRE, FLAT TYPE (7 CORE)	

5-5. MECHANISM DECK ASSEMBLY(2)



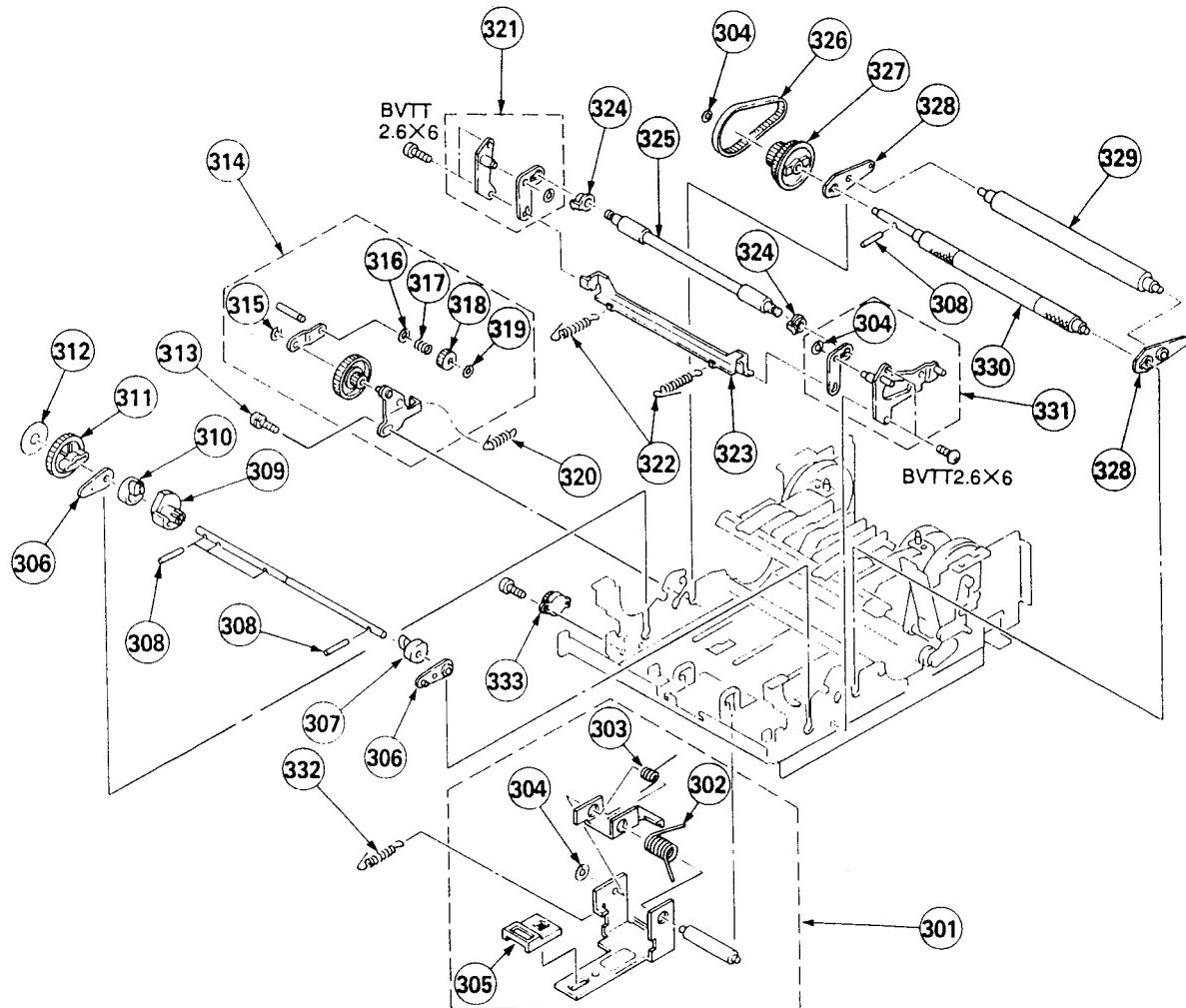
Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
201	3-950-045-01	GEAR (20)		214	3-950-039-01	GEAR (1), RD	
202	3-681-678-00	WASHER, STOPPER		215	3-183-992-01	GEAR, WORM	
203	3-949-935-01	GEAR (16)		216	X-3942-172-1	MOTOR ASSY, RIBBON	
204	A-8263-674-A	REEL (T) BLOCK ASSY, RIBBON		217	*A-8275-440-A	SW-216 BOARD, COMPLETE	
205	3-950-048-01	GEAR, SPM IDLER		218	*3-950-035-02	BOARD, SLIDE	
206	*A-7018-136-A	ARM BLOCK ASSY, PENDULUM		219	A-8263-675-A	REEL (S) BLOCK ASSY, RIBBON	
207	3-701-441-01	WASHER		220	3-950-050-01	SPRING, TORSION	
208	3-949-933-01	SPRING (PENDULUM), COMPRESSION		221	*X-3942-127-1	ARM ASSY, SLIDE	
209	3-950-040-01	GEAR (2), RD		222	4-926-219-02	RING (DIA. 2.3), RETAINING	
211	*3-950-046-01	ARM, T LOCK		223	*3-950-037-01	CLAW, RIBBON BRAKE	
212	3-950-051-01	FELT, T LOCK		224	*3-950-036-01	CLAW, RIBBON LOCK	
213	3-950-049-01	COVER, GEAR					

5-6. MECHANISM DECK ASSEMBLY(3)



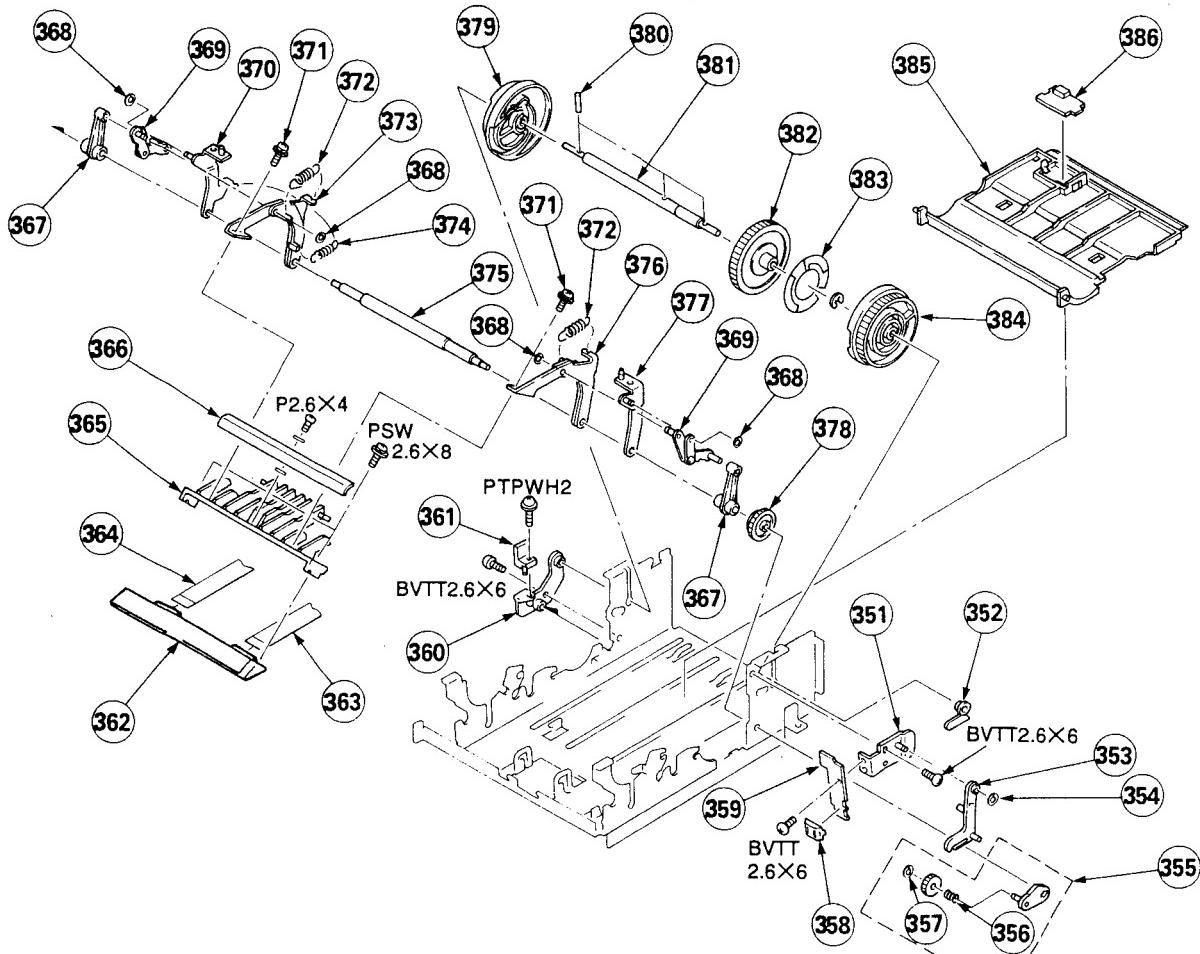
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	*A-8267-975-B	PAPER ASSY		264	*3-949-985-01	SHUTTER, PAPER	
252	*3-949-984-11	LEVER (R), RELEASE		265	3-949-982-01	ROLLER (F)	
253	3-949-994-01	SPRING, TENSION		266	A-7018-141-A	LIMITER BLOCK ASSY	
254	3-949-996-01	SPRING (RELEASE LEVER), TENSION		267	3-949-989-01	GEAR (16F)	
255	3-183-205-01	ROLLER		268	3-950-001-01	SCREW, STEP	
256	*3-949-983-11	LEVER (L), RELEASE		269	3-949-988-01	GEAR (20-21)	
257	3-949-987-01	GEAR (16D)		270	3-183-206-01	GEAR	
258	3-183-607-01	ROLLER K		271	3-183-231-01	SHAFT RETAINER L (EP)	
259	*3-949-986-01	RETAINER, PAPER		272	*A-8275-433-A	SW-208 BOARD, COMPLETE	
260	3-183-204-01	SP (EP), RETAINER		273	1-698-019-31	MOTOR, DC (FAN)	
261	4-926-219-02	RING (DIA. 2.3), RETAINING		274	*A-8275-434-A	SW-211 BOARD, COMPLETE	
262	*3-949-990-01	SHAFT, LIMITER		275	*3-950-003-01	GUIDE (1), CASSETTE	
263	3-183-230-01	SHAFT RETAINER R (EP)		276	3-183-232-01	GUIDE, TRAY	

5-7. MECHANISM DECK ASSEMBLY(4)



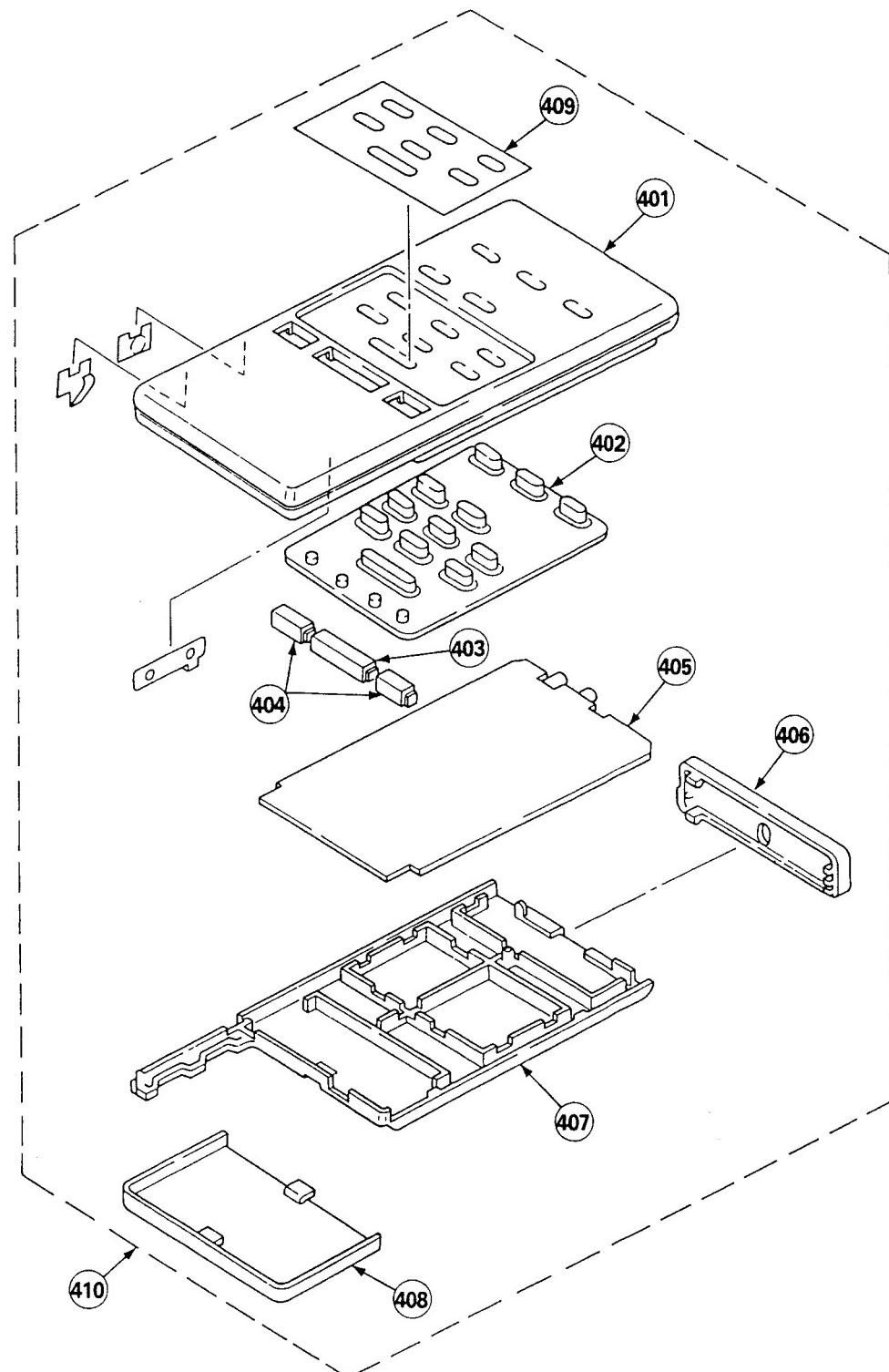
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	*A-8267-878-C	ARM ASSY		317	3-949-933-01	SPRING (PENDULUM), COMPRESSION	
302	3-183-212-02	TORSION SPRING		318	3-949-935-01	GEAR (16)	
303	3-183-213-03	TORSION SPRING		319	3-681-678-00	WASHER, STOPPER	
304	4-926-219-02	RING (DIA. 2.3), RETAINING		320	3-954-567-01	SPRING (TENSION PLATE), TENSION	
305	3-183-209-02	LEVER		321	*A-7018-157-A	ARM (L) BLOCK ASSY, ROLLER	
306	*3-949-912-01	BEARING, PRESS		322	3-955-157-01	SPRING, TENSION	
307	*3-950-308-01	CAM (R), RETAINER ROLLER PRESS		323	*3-949-939-01	PRESSURE, CAP	
308	3-949-911-01	PIN		324	3-949-937-01	BEARING, RETAINER ROLLER	
309	3-183-216-02	CAM		325	3-183-606-01	ROLLER, RETAINER	
310	*3-949-948-01	CAM (L), RETAINER ROLLER PRESS		326	3-949-915-01	BELT	
311	3-949-951-01	GEAR, P DRIVING		327	3-949-918-01	GEAR, CAPSTAN	
312	3-949-952-01	REFLECTOR, P SENSOR		328	3-949-910-01	BEARING, PLATEN	
313	3-951-872-01	SCREW (2.6X6)		329	*3-949-908-01	ROLLER, PLATEN	
314	A-7018-148-A	ARM BLOCK ASSY, TENSION		330	*3-949-907-01	ROLLER, CAPSTAN	
315	3-669-596-01	WASHER (2.3), STOPPER		331	*A-7018-156-A	ARM (R) BLOCK ASSY, ROLLER	
316	3-701-441-01	WASHER		332	3-949-929-01	SPRING (ARM), TENSION	

5-8. MECHANISM DECK ASSEMBLY(5)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
351	*X-3942-121-1	ARM ASSY, LOCK		369	*X-3942-117-1	LINK ASSY	
352	3-949-916-01	BEARING, CAM SHAFT		370	*X-3942-119-1	FULCRUM (L) ASSY, LINK	
353	3-950-022-01	ARM, LOCK		371	3-669-607-11	+PSW (SMALL ROUND) (2,6)	
354	3-669-596-01	WASHER (2,3), STOPPER		372	3-954-605-01	SPRING (HEAD), TENSION	
355	A-7018-146-A	GEAR BLOCK ASSY, SWING		373	*X-3942-160-1	ARM ASSY (L), POWER	
356	3-949-933-01	SPRING (PENDULUM), COMPRESSION		374	3-949-973-01	SPRING, TENSION	
357	3-681-678-00	WASHER, SLIT		375	*3-949-950-01	SHAFT, POWER ARM	
358	*3-952-169-01	COVER, SENSOR		376	*X-3942-159-1	ARM ASSY (R), POWER	
359	*A-8275-439-A	SW-210 BOARD, COMPLETE		377	*X-3942-118-1	FULCRUM (R) ASSY, LINK	
360	*3-949-974-01	BEARING, HEAD ARM SHAFT		378	3-950-077-01	GEAR (A), RING SWING	
361	*A-8275-453-A	SW-214 BOARD, COMPLETE		379	3-949-971-01	CAM (L), HEAD POWER	
362	1-543-987-11	HEAD, THERMAL (UP-1200A)		380	3-949-911-01	PIN	
	1-500-114-11	HEAD, THERMAL (UP-1200AEPM)		381	*3-949-968-01	SHAFT, CAM	
363	1-751-238-11	CABLE, FLAT (FHH-1)		382	3-949-969-01	GEAR (C), HEAD DRIVE	
364	1-751-239-11	CABLE, FLAT (FHH-2)		383	3-949-972-01	PLATE, POSITION, HEAD	
365	*3-183-612-01	HEAT SINK		384	3-949-970-01	CAM (R), HEAD POWER	
366	*3-950-142-01	GUIDE, RIBBON		385	*3-949-909-01	GUIDE (2), CASSETTE	
367	3-949-917-01	LEVER, POWER		386	*A-8275-452-A	SW-217 BOARD, COMPLETE	
368	4-926-219-02	RING (DIA. 2,3), RETAINING					

5-9. REMOTE CONTROL UNIT



Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
401	9-901-744-01	ORNAMENTAL, PANEL		406	9-997-453-01	PANEL, FRONT	
402	9-901-745-01	SHEET, RUBBER		407	2-290-611-00	CASE, BOTTOM	
403	2-290-632-00	BUTTON, PUSH (L)		408	2-290-606-51	COVER, BATTERY	
404	2-290-633-01	BUTTON, PUSH (R)		409	9-997-456-01	LABEL, MODEL NUMBER	
405	9-997-457-01	SR-W2 BOARD		410	1-465-508-21	COMMANDER, REMOTE	

SECTION 6

ELECTRICAL PARTS LIST

VA-76

NOTE:

- Items marked "*" are not stocked because they are seldom required for routine servicing. Some delay should be expected when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise stated.

RESISTORS

- All resistors are in ohms.
- F:non-flammable

When indicating part by reference number, please include the board name.

CAPACITORS
• MF: μ F, PF: $\mu\mu$ F **COILS**
• MMH: mH, UH: μ H

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*A-8274-827-A	VA-76 BOARD, COMPLETE (UP-1200A)			C148	1-163-141-00	CERAMIC	0.001uF 5%
	*****			C149	1-164-004-11	CERAMIC	0.1uF 10%
C101	1-163-038-00	CERAMIC	0.1uF 25V	C150	1-164-346-11	CERAMIC	1uF 16V
C102	1-164-004-11	CERAMIC	0.1uF 10% 20%	C151	1-163-038-00	CERAMIC	0.1uF 25V
C103	1-124-778-00	ELECT	22uF 20% 6.3V	C152	1-163-139-00	CERAMIC	820PF 5% 50V
C104	1-163-038-00	CERAMIC	0.1uF 25V	C153	1-126-217-11	ELECT	15uF 20% 10V
C105	1-164-346-11	CERAMIC	1uF 16V	C154	1-163-038-00	CERAMIC	0.1uF 25V
C106	1-164-346-11	CERAMIC	1uF 16V	C155	1-163-038-00	CERAMIC	0.1uF 25V
C107	1-163-275-11	CERAMIC	0.001uF 5% 50V	C156	1-163-038-00	CERAMIC	0.1uF 25V
C108	1-126-217-11	ELECT	15uF 20% 10V	C157	1-126-217-11	ELECT	15uF 20% 10V
C109	1-163-038-00	CERAMIC	0.1uF 25V	C158	1-164-346-11	CERAMIC	1uF 16V
C110	1-163-110-00	CERAMIC	51PF 5% 50V	C159	1-163-038-00	CERAMIC	0.1uF 25V
C111	1-163-097-00	CERAMIC	15PF 5% 50V	C160	1-128-065-11	ELECT	68uF 20% 10V
C112	1-163-253-11	CERAMIC	120PF 5% 50V	C161	1-126-206-11	ELECT	100uF 20% 6.3V
C113	1-164-346-11	CERAMIC	1uF 16V	C162	1-163-038-00	CERAMIC	0.1uF 25V
C114	1-163-141-00	CERAMIC	0.001uF 5% 50V	C163	1-128-065-11	ELECT	68uF 20% 10V
C115	1-124-778-00	ELECT	22uF 20% 6.3V	C164	1-126-206-11	ELECT	100uF 20% 6.3V
C116	1-163-038-00	CERAMIC	0.1uF 25V	C165	1-163-038-00	CERAMIC	0.1uF 25V
C117	1-126-217-11	ELECT	15uF 20% 10V	C166	1-126-217-11	ELECT	15uF 20% 10V
C118	1-163-038-00	CERAMIC	0.1uF 25V	C167	1-163-241-11	CERAMIC	39PF 5% 50V
C119	1-163-038-00	CERAMIC	0.1uF 25V	C168	1-163-243-11	CERAMIC	47PF 5% 50V
C120	1-163-141-00	CERAMIC	0.001uF 5% 50V	C169	1-163-038-00	CERAMIC	0.1uF 25V
C121	1-163-141-00	CERAMIC	0.001uF 5% 50V	C170	1-163-038-00	CERAMIC	0.1uF 25V
C122	1-163-141-00	CERAMIC	0.001uF 5% 50V	C171	1-163-235-11	CERAMIC	22PF 5% 50V
C123	1-163-239-11	CERAMIC	33PF 5% 50V	C172	1-163-038-00	CERAMIC	0.1uF 25V
C124	1-163-235-11	CERAMIC	22PF 5% 50V	C173	1-163-038-00	CERAMIC	0.1uF 25V
C125	1-164-004-11	CERAMIC	0.1uF 10% 25V	C174	1-126-217-11	ELECT	15uF 20% 10V
C126	1-163-141-00	CERAMIC	0.001uF 5% 50V	C175	1-163-038-00	CERAMIC	15uF 20% 10V
C127	1-163-038-00	CERAMIC	0.1uF 25V	C176	1-163-038-00	CERAMIC	0.1uF 25V
C128	1-163-275-11	CERAMIC	0.001uF 5% 50V	C177	1-163-038-00	CERAMIC	0.1uF 25V
C129	1-163-275-11	CERAMIC	0.001uF 5% 50V	C178	1-163-141-00	CERAMIC	0.001uF 5% 50V
C130	1-126-217-11	ELECT	15uF 20% 10V	C179	1-163-235-11	CERAMIC	22PF 5% 50V
C131	1-164-004-11	CERAMIC	0.1uF 10% 25V	C180	1-163-038-00	CERAMIC	0.1uF 25V
C132	1-163-038-00	CERAMIC	0.1uF 25V	C181	1-163-038-00	CERAMIC	0.1uF 25V
C133	1-163-141-00	CERAMIC	0.001uF 5% 50V	C182	1-163-038-00	CERAMIC	0.1uF 25V
C134	1-165-320-11	CERAMIC	0.47uF 10% 16V	C183	1-163-038-00	CERAMIC	0.1uF 25V
C135	1-126-217-11	ELECT	15uF 20% 10V	C184	1-163-257-11	CERAMIC	180PF 5% 50V
C136	1-163-038-00	CERAMIC	0.1uF 25V	C185	1-163-038-00	CERAMIC	0.1uF 25V
C137	1-164-182-11	CERAMIC	0.0033uF 10% 50V	C186	1-163-038-00	CERAMIC	0.1uF 25V
C138	1-163-251-11	CERAMIC	100PF 5% 50V	C187	1-163-038-00	CERAMIC	0.1uF 25V
C139	1-163-038-00	CERAMIC	0.1uF 25V	C188	1-164-232-11	CERAMIC	0.01uF 10% 50V
C140	1-163-038-00	CERAMIC	0.1uF 25V	C189	1-163-017-00	CERAMIC	0.0047uF 10% 50V
C141	1-164-004-11	CERAMIC	0.1uF 10% 25V	C190	1-163-137-00	CERAMIC	680PF 5% 50V
C142	1-164-182-11	CERAMIC	15uF 20% 10V	C191	1-164-232-11	CERAMIC	0.1uF 10% 50V
C143	1-126-217-11	ELECT	15uF 20% 10V	C192	1-164-232-11	CERAMIC	0.01uF 10% 50V
C144	1-163-141-00	CERAMIC	0.001uF 5% 50V	C193	1-126-217-11	ELECT	15uF 20% 10V
C145	1-164-232-11	CERAMIC	0.01uF 10% 50V	C194	1-164-232-11	CERAMIC	0.01uF 10% 50V
C146	1-164-232-11	CERAMIC	0.01uF 10% 50V	C195	1-126-217-11	ELECT	15uF 20% 10V
C147	1-164-004-11	CERAMIC	0.1uF 10% 25V	C196	1-164-232-11	CERAMIC	0.01uF 10% 50V
				C197	1-164-232-11	CERAMIC	0.01uF 10% 50V
				C198	1-126-217-11	ELECT	15uF 20% 10V
				C199	1-126-217-11	ELECT	15uF 20% 10V
				C200	1-126-217-11	ELECT	15uF 20% 10V
				C201	1-163-141-00	CERAMIC	0.001uF 5% 50V
				C202	1-126-603-11	ELECT	4.7uF 20% 35V
				C203	1-164-232-11	CERAMIC	0.01uF 10% 50V
				C204	1-163-089-00	CERAMIC	6PF 50V
				C205	1-163-038-00	CERAMIC	0.1uF 25V
				C206	1-164-005-11	CERAMIC	0.47uF 25V
				C207	1-163-038-00	CERAMIC	0.1uF 25V

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Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
C209	1-126-217-11	ELECT	15uF	20%	10V	C341	1-126-217-11	ELECT	15uF	20%	10V
C210	1-164-005-11	CERAMIC	0.47uF		25V	C342	1-163-038-00	CERAMIC	0.1uF		25V
C211	1-164-005-11	CERAMIC	0.47uF		25V	C343	1-126-217-11	ELECT	15uF	20%	10V
C212	1-163-038-00	CERAMIC	0.1uF		25V	C344	1-163-038-00	CERAMIC	0.1uF		25V
C213	1-126-217-11	ELECT	15uF	20%	10V	C345	1-126-217-11	ELECT	15uF	20%	10V
C214	1-163-038-00	CERAMIC	0.1uF		25V	C346	1-163-038-00	CERAMIC	0.1uF		25V
C215	1-164-005-11	CERAMIC	0.47uF		25V	C347	1-163-227-11	CERAMIC	10PF		50V
C216	1-126-193-11	ELECT	1uF	20%	50V	C348	1-164-004-11	CERAMIC	0.1uF	10%	25V
C217	1-164-005-11	CERAMIC	0.47uF		25V	C349	1-128-065-11	ELECT	68uF	20%	10V
C218	1-163-235-11	CERAMIC	22PF	5%	50V	C350	1-163-038-00	CERAMIC	0.1uF		25V
C220	1-164-005-11	CERAMIC	0.47uF		25V	C351	1-126-217-11	ELECT	15uF	20%	10V
C221	1-164-005-11	CERAMIC	0.47uF		25V	C352	1-163-038-00	CERAMIC	0.1uF		25V
C223	1-164-005-11	CERAMIC	0.47uF		25V	C353	1-163-809-11	CERAMIC	0.047uF	10%	25V
C224	1-164-005-11	CERAMIC	0.47uF		25V	C354	1-163-037-11	CERAMIC	0.022uF	10%	25V
C225	1-126-217-11	ELECT	15uF	20%	10V	C355	1-163-038-00	CERAMIC	0.1uF		25V
C226	1-163-038-00	CERAMIC	0.1uF		25V	C356	1-163-809-11	CERAMIC	0.047uF	10%	25V
C227	1-164-005-11	CERAMIC	0.47uF		25V	C357	1-164-489-11	CERAMIC	0.22uF	10%	16V
C228	1-163-251-11	CERAMIC	100PF	5%	50V	C358	1-164-004-11	CERAMIC	0.1uF	10%	25V
C230	1-163-038-00	CERAMIC	0.1uF		25V	C359	1-126-193-11	ELECT	1uF	20%	50V
C233	1-163-257-11	CERAMIC	180PF	5%	50V	C360	1-163-106-00	CERAMIC	36PF	5%	50V
C250	1-163-127-00	CERAMIC	270PF	5%	50V	C363	1-128-065-11	ELECT	68uF	20%	10V
C251	1-163-110-00	CERAMIC	51PF	5%	50V	C364	1-163-038-00	CERAMIC	0.1uF		25V
C252	1-126-217-11	ELECT	15uF	20%	10V	C368	1-163-038-00	CERAMIC	0.1uF		25V
C260	1-164-004-11	CERAMIC	0.1uF	10%	25V	C369	1-126-217-11	ELECT	15uF	20%	10V
C271	1-126-217-11	ELECT	15uF	20%	10V	C370	1-163-038-00	CERAMIC	0.1uF		25V
C281	1-126-207-11	ELECT	33uF	20%	4V	C371	1-163-038-00	CERAMIC	0.1uF		25V
C282	1-126-217-11	ELECT	15uF	20%	10V	C372	1-126-603-11	ELECT	4.7uF	20%	35V
C285	1-164-005-11	CERAMIC	0.47uF		25V	C373	1-163-227-11	CERAMIC	10PF		50V
C286	1-164-005-11	CERAMIC	0.47uF		25V	C374	1-164-004-11	CERAMIC	0.1uF	10%	25V
C290	1-164-005-11	CERAMIC	0.47uF		25V	C375	1-163-038-00	CERAMIC	0.1uF		25V
C291	1-164-005-11	CERAMIC	0.47uF		25V	C376	1-164-232-11	CERAMIC	0.01uF	10%	50V
C295	1-164-004-11	CERAMIC	0.1uF	10%	25V	C377	1-135-145-11	TANTAL	0.47uF	20%	25V
C301	1-126-217-11	ELECT	15uF	20%	10V	C378	1-126-217-11	ELECT	15uF	20%	10V
C302	1-163-038-00	CERAMIC	0.1uF		25V	C379	1-163-038-00	CERAMIC	0.1uF		25V
C303	1-163-077-00	CERAMIC	0.1uF	10%	25V	C380	1-126-217-11	ELECT	15uF	20%	10V
C304	1-163-077-00	CERAMIC	0.1uF	10%	25V	C381	1-163-245-11	CERAMIC	56PF	5%	50V
C305	1-163-038-00	CERAMIC	0.1uF		25V	C382	1-135-210-11	TANTAL	4.7uF	10%	10V
C306	1-164-004-11	CERAMIC	0.1uF	10%	25V	C383	1-163-038-00	CERAMIC	0.1uF		25V
C307	1-126-217-11	ELECT	15uF	20%	10V	C384	1-163-038-00	CERAMIC	0.1uF		25V
C308	1-164-346-11	CERAMIC	1uF		16V	C385	1-163-038-00	CERAMIC	0.1uF		25V
C309	1-126-217-11	ELECT	15uF	20%	10V	C386	1-164-232-11	CERAMIC	0.01uF	10%	50V
C310	1-163-038-00	CERAMIC	0.1uF		25V	C387	1-163-038-00	CERAMIC	0.1uF		25V
C311	1-163-038-00	CERAMIC	0.1uF		25V	C388	1-126-217-11	ELECT	15uF	20%	10V
C312	1-126-217-11	ELECT	15uF	20%	10V	C389	1-163-038-00	CERAMIC	0.1uF		25V
C313	1-163-038-00	CERAMIC	0.1uF		25V	C390	1-163-038-00	CERAMIC	0.1uF		25V
C314	1-126-217-11	ELECT	15uF	20%	10V	C391	1-163-229-11	CERAMIC	12PF	5%	50V
C315	1-126-217-11	ELECT	15uF	20%	10V	C393	1-163-038-00	CERAMIC	0.1uF		25V
C316	1-126-217-11	ELECT	15uF	20%	10V	C394	1-128-065-11	ELECT	68uF	20%	10V
C317	1-126-217-11	ELECT	15uF	20%	10V	C395	1-163-038-00	CERAMIC	0.1uF		25V
C318	1-126-217-11	ELECT	15uF	20%	10V	C396	1-126-217-11	ELECT	15uF	20%	10V
C319	1-163-038-00	CERAMIC	0.1uF		25V	C404	1-163-038-00	CERAMIC	0.1uF		25V
C320	1-163-038-00	CERAMIC	0.1uF		25V	C405	1-163-235-11	CERAMIC	22PF	5%	50V
C321	1-126-217-11	ELECT	15uF	20%	10V	C410	1-163-243-11	CERAMIC	47PF	5%	50V
C322	1-126-217-11	ELECT	15uF	20%	10V	C482	1-163-251-11	CERAMIC	100PF	5%	50V
C323	1-163-038-00	CERAMIC	0.1uF		25V	C501	1-126-217-11	ELECT	15uF	20%	10V
C324	1-163-038-00	CERAMIC	0.1uF		25V	C502	1-163-038-00	CERAMIC	0.1uF		25V
C325	1-163-117-00	CERAMIC	100PF	5%	50V	C503	1-163-038-00	CERAMIC	0.1uF		25V
C326	1-163-117-00	CERAMIC	100PF	5%	50V	C504	1-126-217-11	ELECT	15uF	20%	10V
C327	1-163-038-00	CERAMIC	0.1uF		25V	C505	1-163-239-11	CERAMIC	33PF	5%	50V
C328	1-126-217-11	ELECT	15uF	20%	10V	C506	1-163-239-11	CERAMIC	33PF	5%	50V
C336	1-163-038-00	CERAMIC	0.1uF		25V	C507	1-163-038-00	CERAMIC	0.1uF		25V
C337	1-163-227-11	CERAMIC	10PF		50V	C508	1-163-038-00	CERAMIC	0.1uF		25V
C338	1-164-004-11	CERAMIC	0.1uF	10%	25V	C509	1-126-217-11	ELECT	15uF	20%	10V
C339	1-126-217-11	ELECT	15uF	20%	10V	C512	1-163-038-00	CERAMIC	0.1uF		25V
C340	1-163-038-00	CERAMIC	0.1uF		25V	C513	1-164-005-11	CERAMIC	0.47uF		25V

Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
C514	1-163-038-91	CERAMIC	0.1uF	25V	D302	8-719-820-41	DIODE 1SS302
C515	1-163-038-91	CERAMIC	0.1uF	25V	D310	8-719-820-41	DIODE 1SS302
C516	1-126-217-11	ELECT	15uF	20%	D311	8-719-820-41	DIODE 1SS302
C517	1-163-038-91	CERAMIC	0.1uF	25V	D312	8-719-820-41	DIODE 1SS302
C518	1-164-232-11	CERAMIC	0.01uF	10%	D313	8-719-820-41	DIODE 1SS302
C519	1-164-232-11	CERAMIC	0.01uF	10%	D503	8-719-820-41	DIODE 1SS302
C520	1-163-809-11	CERAMIC	0.047uF	10%	D508	8-719-820-41	DIODE 1SS302
C521	1-163-809-11	CERAMIC	0.047uF	10%	D509	8-719-820-41	DIODE 1SS302
C522	1-163-809-11	CERAMIC	0.047uF	10%	D910	8-719-025-18	DIODE 02CZ2.0-TE85L
C523	1-164-232-11	CERAMIC	0.01uF	10%	D911	8-719-025-18	DIODE 02CZ2.0-TE85L
C524	1-164-005-11	CERAMIC	0.47uF	25V	D912	8-719-025-18	DIODE 02CZ2.0-TE85L
C525	1-126-217-11	ELECT	15uF	20%			<DELAY LINE>
C526	1-126-217-11	ELECT	15uF	20%			
C527	1-163-038-00	CERAMIC	0.1uF	25V	DL301	1-406-516-11	DELAY LINE, LC (140NS) (EQ)
C528	1-163-038-00	CERAMIC	0.1uF	25V	DL302	1-239-565-11	FILTER, LOW PASS
C529	1-163-038-00	CERAMIC	0.1uF	25V			<FERRITE, BEAD>
C530	1-126-217-11	ELECT	15uF	20%			
C531	1-163-038-00	CERAMIC	0.1uF	25V	FB108	1-412-390-21	INDUCTOR CHIP OUGH
C532	1-126-217-11	ELECT	15uF	20%	FB109	1-412-390-21	INDUCTOR CHIP OUGH
C533	1-163-038-00	CERAMIC	0.1uF	25V	FB305	1-412-390-21	INDUCTOR CHIP OUGH
C534	1-126-217-11	ELECT	15uF	20%	FB306	1-412-390-21	INDUCTOR CHIP OUGH
C535	1-163-038-00	CERAMIC	0.1uF	25V	FB307	1-412-390-21	INDUCTOR CHIP OUGH
C536	1-164-005-11	CERAMIC	0.47uF	25V	FB308	1-412-390-21	INDUCTOR CHIP OUGH
C537	1-164-005-11	CERAMIC	0.47uF	25V	FB309	1-412-390-21	INDUCTOR CHIP OUGH
C538	1-126-217-11	ELECT	15uF	20%	FB310	1-412-390-21	INDUCTOR CHIP OUGH
C539	1-164-232-11	CERAMIC	0.01uF	10%	FB920	1-412-390-21	INDUCTOR CHIP OUGH
C540	1-164-232-11	CERAMIC	0.01uF	10%	FB921	1-412-390-21	INDUCTOR CHIP OUGH
C541	1-164-232-11	CERAMIC	0.01uF	10%			<FILTER>
C543	1-163-235-11	CERAMIC	22PF	5%			
C544	1-164-004-11	CERAMIC	0.1uF	10%	FB922	1-412-390-21	INDUCTOR CHIP OUGH
C545	1-126-217-11	ELECT	15uF	20%	FL101	1-239-492-11	FILTER, EMI
C546	1-163-038-00	CERAMIC	0.1uF	25V	FL201	1-239-563-11	FILTER, LOW PASS
C547	1-163-038-00	CERAMIC	0.1uF	25V	FL202	1-236-191-11	FILTER, BAND PASS
C570	1-163-038-00	CERAMIC	0.1uF	25V	FL203	1-239-564-11	FILTER, LOW PASS
C571	1-126-217-11	ELECT	15uF	20%	FL304	1-406-515-11	DELAY LINE, LC
C572	1-126-217-11	ELECT	15uF	20%	FL501	1-239-563-11	FILTER, LOW PASS
C611	1-126-217-11	ELECT	15uF	20%	FL502	1-239-563-11	FILTER, LOW PASS
C651	1-128-065-11	ELECT	68uF	20%	FL503	1-239-563-11	FILTER, LOW PASS
C901	1-163-239-11	CERAMIC	33PF	5%	FL504	1-239-564-11	FILTER, LOW PASS
C902	1-163-239-11	CERAMIC	33PF	5%	FL505	1-236-191-11	FILTER, BAND PASS
C903	1-163-239-11	CERAMIC	33PF	5%			<IC>
C910	1-135-210-11	TANTAL	4.7uF	10%			
C911	1-135-210-11	TANTAL	4.7uF	10%			
C950	1-163-127-00	CERAMIC	270PF	5%	IC101	8-759-079-66	IC TC74VHC123AFS
C951	1-163-239-11	CERAMIC	33PF	5%	IC102	8-759-105-49	IC UPC319G2
				IC103	8-759-085-67	IC UPC339G2	
				IC104	8-759-996-43	IC RC4558PS	
				IC106	8-759-710-12	IC NJM2230M	
CN101	1-565-212-11	CONNECTOR, FPC (ZIF)	26P		IC107	8-752-326-08	IC CXD1159Q
CN102	1-565-212-11	CONNECTOR, FPC (ZIF)	26P		IC108	8-759-907-81	IC SN74LS221NS
CN105	*1-560-892-00	PIN, CONNECTOR	4P		IC109	8-759-242-70	IC TC7WU04F
CN110	1-506-472-11	PIN, CONNECTOR	7P		IC110	8-759-907-81	IC SN74LS221NS
CN502	*1-564-005-11	PIN, CONNECTOR	6P		IC111	8-759-981-48	IC TL082CPS
					IC112	8-759-011-65	IC MC74HC4053F
					IC113	8-759-157-22	IC PQ06TZ1U
CT101	1-141-423-61	CAP, ADJ			IC114	8-759-157-17	IC PQ05SZ1U
CT102	1-141-423-61	CAP, ADJ			IC119	8-759-097-87	IC MB621948
					IC120	8-759-711-62	IC NJM2240M
							<DIODE>
D101	8-719-002-81	DIODE 1T363A			IC121	8-752-352-20	IC CXD2023Q
D109	8-719-820-41	DIODE 1SS302			IC122	8-759-710-86	IC NJM2233BM
D110	8-719-820-41	DIODE 1SS302			IC123	8-759-710-07	IC NJM2234M
D125	8-719-024-82	DIODE 1SS300			IC125	8-759-710-86	IC NJM2233BM
D301	8-719-820-41	DIODE 1SS302			IC126	8-759-242-64	IC TC4W53F

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
IC128	8-759-242-72	IC TC7W00F		Q120	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC130	8-752-326-08	IC CXD1159Q		Q121	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC150	8-759-242-76	IC TC7W08F		Q122	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC301	8-752-054-80	IC CXA1521M		Q123	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
IC302	8-759-011-65	IC MC74HC4053F		Q124	8-729-402-84	TRANSISTOR XN4601	
IC303	8-759-060-00	IC LM324DR		Q125	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC304	8-759-060-00	IC LM324DF		Q126	8-729-402-84	TRANSISTOR XN4601	
IC306	8-759-105-49	IC UPC319GZ		Q301	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
IC307	8-759-635-27	IC M62352GP		Q302	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC308	8-759-635-27	IC M62352GP		Q303	8-729-402-84	TRANSISTOR XN4601	
IC309	8-759-278-57	IC AK6420HF		Q304	8-729-402-84	TRANSISTOR XN4601	
IC311	8-752-058-96	IC CXA1585Q		Q305	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC312	8-759-929-26	IC TL431CPS		Q306	8-729-230-60	TRANSISTOR 2SA1586YG	
IC313	8-759-745-64	IC NJM4560M		Q307	8-729-232-66	TRANSISTOR 2SA1618	
IC314	8-759-060-00	IC LM324DR		Q308	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC320	8-759-745-64	IC NJM4560M		Q309	8-729-402-81	TRANSISTOR XN4501	
IC501	8-759-011-65	IC MC74HC4053F		Q310	8-729-230-60	TRANSISTOR 2SA1586YG	
IC504	8-759-254-98	IC M5055-218FP-TE2		Q311	8-729-402-81	TRANSISTOR XN4501	
IC506	8-752-033-07	IC CXA1145M		Q316	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC507	8-752-053-21	IC CXA1211M		Q320	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
IC508	8-759-710-86	IC NJM2233BM		Q321	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
IC511	8-752-053-21	IC CXA1211M		Q322	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
<JACK>				Q323	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
J101	1-565-276-21	JACK, ULTRA SMALL 1P		Q324	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
<INDUCTOR>				Q326	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L101	1-410-389-31	INDUCTOR CHIP 47UH		Q328	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L102	1-410-388-31	INDUCTOR CHIP 39UH		Q329	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L103	1-412-137-11	INDUCTOR 10UH		Q330	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
L110	1-410-200-31	INDUCTOR CHIP 4.7UH		Q334	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L120	1-410-385-11	INDUCTOR CHIP 22UH		Q335	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
L130	1-410-385-11	INDUCTOR CHIP 22UH		Q336	8-729-230-60	TRANSISTOR 2SA1586YG-TE85L	
L301	1-410-377-31	INDUCTOR CHIP 4.7UH		Q350	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L302	1-410-389-31	INDUCTOR CHIP 47UH		Q360	8-729-402-84	TRANSISTOR XN4601	
L303	1-410-388-31	INDUCTOR CHIP 39UH		Q361	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L350	1-410-377-31	INDUCTOR CHIP 4.7UH		Q501	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L501	1-410-384-31	INDUCTOR CHIP 18UH		Q502	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L901	1-410-730-11	INDUCTOR CHIP 0.12UH		Q503	8-729-230-60	TRANSISTOR 2SA1586YG	
L902	1-410-730-11	INDUCTOR CHIP 0.12UH		Q504	8-729-230-60	TRANSISTOR 2SA1586YG	
L903	1-410-730-11	INDUCTOR CHIP 0.12UH		Q505	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
L904	1-412-188-11	INDUCTOR 22UH		Q506	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
<FILTER>				Q507	8-729-232-66	TRANSISTOR 2SA1618	
LF101	1-424-090-11	COIL, LINE FILTER		Q508	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
LF102	1-424-090-11	COIL, LINE FILTER		Q509	8-729-232-66	TRANSISTOR 2SA1618	
LF106	1-424-090-11	COIL, LINE FILTER		Q510	8-729-232-66	TRANSISTOR 2SA1618	
<TRANSISTOR>				Q511	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q101	8-729-230-60	TRANSISTOR 2SA1586YG		Q512	8-729-230-60	TRANSISTOR 2SA1586YG	
Q102	8-729-230-60	TRANSISTOR 2SA1586YG		Q513	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q103	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q514	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q104	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q515	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q106	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q516	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q108	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q517	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q109	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q518	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q110	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q519	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q111	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q520	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q112	8-729-230-60	TRANSISTOR 2SA1586YG		Q521	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q113	8-729-402-87	TRANSISTOR XN2401		Q522	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q116	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q523	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q117	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q525	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q118	8-729-402-84	TRANSISTOR XN4601		Q526	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q119	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		Q527	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
				Q528	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
				Q529	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L	
				Q530	8-729-230-60	TRANSISTOR 2SA1586YG	
				Q531	8-729-230-60	TRANSISTOR 2SA1586YG	
				Q532	8-729-230-60	TRANSISTOR 2SA1586YG	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q540	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R164	1-216-073-00	METAL	10K 5% 1/10W
Q901	8-729-230-60	TRANSISTOR 2SA1586YG		R165	1-216-065-00	METAL	4.7K 5% 1/10W
Q902	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L		R166	1-216-047-00	METAL	820 5% 1/10W
Q910	8-729-230-60	TRANSISTOR 2SA1586YG		R167	1-216-027-00	METAL	120 5% 1/10W
		<REGISTER>		R168	1-216-073-00	METAL	10K 5% 1/10W
R101	1-216-051-00	METAL	1.2K 5% 1/10W	R169	1-216-069-00	METAL	6.8K 5% 1/10W
R102	1-216-053-00	METAL	1.5K 5% 1/10W	R171	1-216-065-00	METAL	4.7K 5% 1/10W
R103	1-216-053-00	METAL	1.5K 5% 1/10W	R172	1-216-057-00	METAL	2.2K 5% 1/10W
R105	1-216-057-00	METAL	2.2K 5% 1/10W	R173	1-216-055-00	METAL	1.8K 5% 1/10W
R106	1-216-057-00	METAL	2.2K 5% 1/10W	R177	1-216-049-00	METAL	1K 5% 1/10W
R107	1-216-065-00	METAL	4.7K 5% 1/10W	R178	1-216-049-00	METAL	1K 5% 1/10W
R108	1-216-057-00	METAL	2.2K 5% 1/10W	R179	1-216-295-11	METAL	0 5% 1/10W
R109	1-216-057-00	METAL	2.2K 5% 1/10W	R180	1-216-049-00	METAL	1K 5% 1/10W
R110	1-216-053-00	METAL	1.5K 5% 1/10W	R181	1-216-070-00	METAL	7.5K 5% 1/10W
R111	1-216-075-00	METAL	12K 5% 1/10W	R182	1-216-049-00	METAL	1K 5% 1/10W
R112	1-216-001-00	METAL	10 5% 1/10W	R185	1-216-061-00	METAL	3.3K 5% 1/10W
R113	1-216-057-00	METAL	2.2K 5% 1/10W	R186	1-216-053-00	METAL	1.5K 5% 1/10W
R114	1-216-065-00	METAL	4.7K 5% 1/10W	R187	1-216-033-00	METAL	220 5% 1/10W
R115	1-216-057-00	METAL	2.2K 5% 1/10W	R188	1-216-057-00	METAL	2.2K 5% 1/10W
R116	1-216-081-00	METAL	22K 5% 1/10W	R190	1-216-057-00	METAL	2.2K 5% 1/10W
R117	1-216-049-00	METAL	1K 5% 1/10W	R191	1-216-057-00	METAL	2.2K 5% 1/10W
R118	1-216-075-00	METAL	12K 5% 1/10W	R192	1-216-049-00	METAL	1K 5% 1/10W
R119	1-216-073-00	METAL	10K 5% 1/10W	R194	1-216-295-11	METAL	0 5% 1/10W
R120	1-216-075-00	METAL	12K 5% 1/10W	R195	1-216-049-00	METAL	1K 5% 1/10W
R121	1-216-035-00	METAL	270 5% 1/10W	R196	1-216-049-00	METAL	1K 5% 1/10W
R123	1-216-049-00	METAL	1K 5% 1/10W	R197	1-216-049-00	METAL	1K 5% 1/10W
R124	1-216-065-00	METAL	4.7K 5% 1/10W	R198	1-216-049-00	METAL	1K 5% 1/10W
R125	1-216-033-00	METAL	220 5% 1/10W	R200	1-216-049-00	METAL	4.3K 5% 1/10W
R126	1-216-295-11	METAL	0 5% 1/10W	R208	1-216-064-00	METAL	390 5% 1/10W
R127	1-216-037-00	METAL	330 5% 1/10W	R209	1-216-039-00	METAL	1K 5% 1/10W
R128	1-216-085-00	METAL	33K 5% 1/10W	R210	1-216-041-00	METAL	470 5% 1/10W
R129	1-216-069-00	METAL	6.8K 5% 1/10W	R211	1-216-057-00	METAL	2.2K 5% 1/10W
R130	1-216-083-00	METAL	27K 5% 1/10W	R212	1-216-073-00	METAL	10K 5% 1/10W
R131	1-216-073-00	METAL	10K 5% 1/10W	R213	1-216-083-00	METAL	27K 5% 1/10W
R132	1-216-073-00	METAL	10K 5% 1/10W	R214	1-216-057-00	METAL	2.2K 5% 1/10W
R133	1-216-097-00	METAL	100K 5% 1/10W	R216	1-216-041-00	METAL	470 5% 1/10W
R134	1-216-049-91	METAL	1K 5% 1/10W	R217	1-216-032-00	METAL	200 5% 1/10W
R135	1-216-033-00	METAL	220 5% 1/10W	R218	1-216-053-00	METAL	1.5K 5% 1/10W
R136	1-216-091-00	METAL	56K 5% 1/10W	R219	1-216-053-00	METAL	1.5K 5% 1/10W
R137	1-216-053-00	METAL	1.5K 5% 1/10W	R220	1-216-049-00	METAL	1K 5% 1/10W
R138	1-216-051-00	METAL	1.2K 5% 1/10W	R221	1-216-049-00	METAL	1K 5% 1/10W
R139	1-216-053-00	METAL	1.5K 5% 1/10W	R222	1-216-073-00	METAL	10K 5% 1/10W
R141	1-216-069-00	METAL	6.8K 5% 1/10W	R223	1-216-041-00	METAL	470 5% 1/10W
R142	1-216-081-00	METAL	22K 5% 1/10W	R224	1-216-049-00	METAL	1K 5% 1/10W
R143	1-216-081-00	METAL	22K 5% 1/10W	R225	1-216-053-00	METAL	1.5K 5% 1/10W
R144	1-216-105-00	METAL	220K 5% 1/10W	R226	1-216-295-11	METAL	0 5% 1/10W
R145	1-216-067-00	METAL	5.6K 5% 1/10W	R227	1-216-053-00	METAL	1.5K 5% 1/10W
R146	1-216-055-00	METAL	1.8K 5% 1/10W	R228	1-216-049-00	METAL	1K 5% 1/10W
R147	1-216-057-00	METAL	2.2K 5% 1/10W	R229	1-216-053-00	METAL	1.5K 5% 1/10W
R148	1-216-057-00	METAL	2.2K 5% 1/10W	R230	1-216-049-00	METAL	1K 5% 1/10W
R149	1-216-063-00	METAL	3.9K 5% 1/10W	R231	1-216-051-00	METAL	1.2K 5% 1/10W
R150	1-216-057-00	METAL	2.2K 5% 1/10W	R232	1-216-041-00	METAL	470 5% 1/10W
R151	1-216-043-00	METAL	560 5% 1/10W	R233	1-216-061-00	METAL	3.3K 5% 1/10W
R152	1-216-031-00	METAL	180 5% 1/10W	R235	1-216-053-00	METAL	1.5K 5% 1/10W
R153	1-216-043-91	METAL	560 5% 1/10W	R236	1-216-053-00	METAL	1.5K 5% 1/10W
R154	1-216-057-00	METAL	2.2K 5% 1/10W	R237	1-216-049-00	METAL	1K 5% 1/10W
R155	1-216-093-00	METAL	68K 5% 1/10W	R238	1-216-049-00	METAL	1K 5% 1/10W
R156	1-216-021-00	METAL	68 5% 1/10W	R239	1-216-033-00	METAL	220 5% 1/10W
R157	1-216-057-00	METAL	2.2K 5% 1/10W	R240	1-216-061-00	METAL	3.3K 5% 1/10W
R158	1-216-061-00	METAL	3.3K 5% 1/10W	R241	1-216-053-00	METAL	1.5K 5% 1/10W
R159	1-216-057-00	METAL	2.2K 5% 1/10W	R245	1-216-105-00	METAL	220K 5% 1/10W
R160	1-216-065-00	METAL	4.7K 5% 1/10W	R251	1-216-295-11	METAL	0 5% 1/10W
R161	1-216-069-00	METAL	6.8K 5% 1/10W	R255	1-216-041-00	METAL	470 5% 1/10W
R162	1-216-665-11	METAL	3.9K 0.50% 1/10W	R259	1-216-295-11	METAL	0 5% 1/10W
R163	1-216-049-00	METAL	1K 5% 1/10W	R260	1-216-057-00	METAL	2.2K 5% 1/10W

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Ref. No	Part No.	Description			Remark	Ref. No	Part No.	Description			Remark
R268	1-216-295-11	METAL	0	5%	1/10W	R353	1-216-089-00	METAL	47K	5%	1/10W
R280	1-216-061-00	METAL	3.3K	5%	1/10W	R354	1-216-073-00	METAL	10K	5%	1/10W
R281	1-216-022-00	METAL	75	5%	1/10W	R355	1-216-089-00	METAL	47K	5%	1/10W
R282	1-216-032-00	METAL	200	5%	1/10W	R356	1-216-073-00	METAL	10K	5%	1/10W
R283	1-216-053-00	METAL	1.5K	5%	1/10W	R357	1-216-057-00	METAL	2.2K	5%	1/10W
R284	1-216-689-11	METAL	39K	5%	1/10W	R360	1-216-057-00	METAL	2.2K	5%	1/10W
R285	1-216-053-00	METAL	1.5K	5%	1/10W	R367	1-216-047-00	METAL	820	5%	1/10W
R288	1-216-043-00	METAL	560	5%	1/10W	R370	1-216-041-00	METAL	470	5%	1/10W
R289	1-216-057-00	METAL	2.2K	5%	1/10W	R371	1-216-057-00	METAL	2.2K	5%	1/10W
R290	1-216-045-00	METAL	680	5%	1/10W	R376	1-216-053-00	METAL	1.5K	5%	1/10W
R291	1-216-045-00	METAL	680	5%	1/10W	R378	1-216-119-00	METAL	820K	5%	1/10W
R292	1-216-031-00	METAL	180	5%	1/10W	R379	1-216-295-11	METAL	0	5%	1/10W
R293	1-216-057-00	METAL	2.2K	5%	1/10W	R380	1-216-033-00	METAL	220	5%	1/10W
R294	1-216-065-00	METAL	4.7K	5%	1/10W	R381	1-216-295-11	METAL	0	5%	1/10W
R301	1-216-053-00	METAL	1.5K	5%	1/10W	R393	1-216-043-00	METAL	560	5%	1/10W
R302	1-216-053-00	METAL	1.5K	5%	1/10W	R394	1-216-057-00	METAL	2.2K	5%	1/10W
R303	1-216-053-00	METAL	1.5K	5%	1/10W	R395	1-216-053-00	METAL	1.5K	5%	1/10W
R304	1-216-033-00	METAL	220	5%	1/10W	R397	1-216-049-00	METAL	1K	5%	1/10W
R305	1-216-033-00	METAL	220	5%	1/10W	R399	1-216-049-00	METAL	1K	5%	1/10W
R306	1-216-057-00	METAL	2.2K	5%	1/10W	R400	1-216-033-00	METAL	220	5%	1/10W
R307	1-216-057-00	METAL	2.2K	5%	1/10W	R401	1-216-053-00	METAL	1.5K	5%	1/10W
R308	1-216-061-00	METAL	3.3K	5%	1/10W	R402	1-216-053-00	METAL	1.5K	5%	1/10W
R309	1-216-065-00	METAL	4.7K	5%	1/10W	R403	1-216-053-00	METAL	1.5K	5%	1/10W
R310	1-216-065-00	METAL	4.7K	5%	1/10W	R406	1-216-033-00	METAL	220	5%	1/10W
R311	1-216-061-00	METAL	3.3K	5%	1/10W	R407	1-216-043-00	METAL	560	5%	1/10W
R313	1-216-033-00	METAL	220	5%	1/10W	R408	1-216-057-00	METAL	2.2K	5%	1/10W
R314	1-216-033-00	METAL	220	5%	1/10W	R409	1-216-053-00	METAL	1.5K	5%	1/10W
R315	1-216-089-00	METAL	47K	5%	1/10W	R410	1-216-049-00	METAL	1K	5%	1/10W
R316	1-216-033-00	METAL	220	5%	1/10W	R413	1-216-049-00	METAL	1K	5%	1/10W
R317	1-216-033-00	METAL	220	5%	1/10W	R414	1-216-033-00	METAL	220	5%	1/10W
R318	1-216-033-00	METAL	220	5%	1/10W	R415	1-216-114-00	METAL	510K	5%	1/10W
R319	1-216-073-00	METAL	10K	5%	1/10W	R416	1-216-053-00	METAL	1.5K	5%	1/10W
R320	1-216-033-00	METAL	220	5%	1/10W	R417	1-216-053-00	METAL	1.5K	5%	1/10W
R321	1-216-033-00	METAL	220	5%	1/10W	R418	1-216-049-00	METAL	1K	5%	1/10W
R322	1-216-073-00	METAL	10K	5%	1/10W	R419	1-216-051-00	METAL	1.2K	5%	1/10W
R323	1-216-073-00	METAL	10K	5%	1/10W	R420	1-208-789-11	METAL	2K	0.50%	1/10W
R324	1-216-033-00	METAL	220	5%	1/10W	R422	1-216-041-00	METAL	470	5%	1/10W
R325	1-216-073-00	METAL	10K	5%	1/10W	R424	1-216-033-00	METAL	220	5%	1/10W
R326	1-216-057-00	METAL	2.2K	5%	1/10W	R425	1-216-061-00	METAL	3.3K	5%	1/10W
R327	1-216-077-00	METAL	15K	5%	1/10W	R429	1-216-043-00	METAL	560	5%	1/10W
R328	1-216-033-00	METAL	220	5%	1/10W	R430	1-216-057-00	METAL	2.2K	5%	1/10W
R329	1-216-033-00	METAL	220	5%	1/10W	R432	1-216-057-00	METAL	2.2K	5%	1/10W
R330	1-216-057-00	METAL	2.2K	5%	1/10W	R433	1-216-053-00	METAL	1.5K	5%	1/10W
R331	1-216-033-00	METAL	220	5%	1/10W	R434	1-216-075-00	METAL	12K	5%	1/10W
R332	1-216-053-00	METAL	1.5K	5%	1/10W	R435	1-216-053-00	METAL	1.5K	5%	1/10W
R333	1-216-057-00	METAL	2.2K	5%	1/10W	R436	1-216-049-00	METAL	1K	5%	1/10W
R334	1-216-053-00	METAL	1.5K	5%	1/10W	R437	1-216-049-00	METAL	1K	5%	1/10W
R335	1-216-053-00	METAL	1.5K	5%	1/10W	R439	1-216-069-00	METAL	6.8K	5%	1/10W
R336	1-216-033-00	METAL	220	5%	1/10W	R441	1-216-049-00	METAL	1K	5%	1/10W
R337	1-216-073-00	METAL	10K	5%	1/10W	R442	1-216-033-00	METAL	220	5%	1/10W
R338	1-216-033-00	METAL	220	5%	1/10W	R443	1-216-103-00	METAL	180K	5%	1/10W
R339	1-216-073-00	METAL	10K	5%	1/10W	R444	1-216-033-00	METAL	220	5%	1/10W
R340	1-216-057-00	METAL	2.2K	5%	1/10W	R445	1-216-025-00	METAL	100	5%	1/10W
R341	1-216-057-00	METAL	2.2K	5%	1/10W	R446	1-216-033-00	METAL	220	5%	1/10W
R342	1-216-045-00	METAL	680	5%	1/10W	R447	1-216-053-00	METAL	1.5K	5%	1/10W
R343	1-216-061-00	METAL	3.3K	5%	1/10W	R448	1-216-053-00	METAL	1.5K	5%	1/10W
R344	1-216-057-00	METAL	2.2K	5%	1/10W	R449	1-216-053-00	METAL	1.5K	5%	1/10W
R345	1-216-057-00	METAL	2.2K	5%	1/10W	R450	1-216-049-00	METAL	1K	5%	1/10W
R346	1-216-117-00	METAL	680K	5%	1/10W	R451	1-216-049-00	METAL	1K	5%	1/10W
R347	1-216-073-00	METAL	10K	5%	1/10W	R452	1-216-049-00	METAL	1K	5%	1/10W
R348	1-216-053-00	METAL	1.5K	5%	1/10W	R453	1-216-033-00	METAL	220	5%	1/10W
R349	1-216-065-00	METAL	4.7K	5%	1/10W	R454	1-216-295-11	METAL	0	5%	1/10W
R350	1-216-065-00	METAL	4.7K	5%	1/10W	R455	1-216-081-00	METAL	22K	5%	1/10W
R351	1-216-041-00	METAL	470	5%	1/10W	R456	1-216-081-00	METAL	22K	5%	1/10W
R352	1-216-071-00	METAL	8.2K	5%	1/10W	R457	1-216-081-00	METAL	22K	5%	1/10W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R458	1-216-061-00	METAL	3.3K 5% 1/10W	R534	1-216-033-00	METAL	220 5% 1/10W
R459	1-216-061-00	METAL	3.3K 5% 1/10W	R535	1-216-033-00	METAL	220 5% 1/10W
R460	1-216-061-00	METAL	3.3K 5% 1/10W	R536	1-216-033-00	METAL	220 5% 1/10W
R461	1-216-065-00	METAL	4.7K 5% 1/10W	R537	1-216-049-00	METAL	1K 5% 1/10W
R462	1-216-051-00	METAL	1.2K 5% 1/10W	R538	1-216-049-00	METAL	1K 5% 1/10W
R463	1-216-059-00	METAL	2.7K 5% 1/10W	R539	1-216-685-11	METAL	27K 0.50% 1/10W
R464	1-216-097-00	METAL	100K 5% 1/10W	R540	1-216-049-00	METAL	1K 5% 1/10W
R465	1-216-049-00	METAL	1K 5% 1/10W	R541	1-216-049-00	METAL	1K 5% 1/10W
R466	1-216-061-00	METAL	3.3K 5% 1/10W	R542	1-216-049-00	METAL	1K 5% 1/10W
R467	1-216-049-00	METAL	1K 5% 1/10W	R543	1-216-057-00	METAL	2.2K 5% 1/10W
R468	1-216-065-00	METAL	4.7K 5% 1/10W	R544	1-216-049-00	METAL	1K 5% 1/10W
R469	1-216-081-00	METAL	22K 5% 1/10W	R545	1-216-057-00	METAL	2.2K 5% 1/10W
R470	1-216-071-00	METAL	8.2K 5% 1/10W	R546	1-216-049-00	METAL	1K 5% 1/10W
R471	1-216-073-00	METAL	10K 5% 1/10W	R547	1-216-057-00	METAL	2.2K 5% 1/10W
R472	1-216-053-00	METAL	1.5K 5% 1/10W	R548	1-216-049-00	METAL	1K 5% 1/10W
R473	1-216-295-11	METAL	0 5% 1/10W	R549	1-216-049-00	METAL	1K 5% 1/10W
R474	1-216-065-00	METAL	4.7K 5% 1/10W	R550	1-216-049-00	METAL	1K 5% 1/10W
R475	1-216-065-00	METAL	4.7K 5% 1/10W	R551	1-216-057-00	METAL	2.2K 5% 1/10W
R476	1-216-067-00	METAL	5.6K 5% 1/10W	R552	1-216-057-00	METAL	2.2K 5% 1/10W
R477	1-216-077-00	METAL	15K 5% 1/10W	R553	1-216-033-00	METAL	220 5% 1/10W
R478	1-216-053-00	METAL	1.5K 5% 1/10W	R554	1-216-059-00	METAL	2.7K 5% 1/10W
R479	1-216-295-11	METAL	0 5% 1/10W	R555	1-216-059-00	METAL	2.7K 5% 1/10W
R480	1-216-295-11	METAL	0 5% 1/10W	R556	1-216-033-00	METAL	220 5% 1/10W
R482	1-208-775-11	METAL	510 0.50% 1/10W	R557	1-216-041-00	METAL	470 5% 1/10W
R483	1-216-033-00	METAL	220 5% 1/10W	R558	1-216-041-00	METAL	470 5% 1/10W
R487	1-216-051-00	METAL	1.2K 5% 1/10W	R559	1-216-022-00	METAL	75 5% 1/10W
R489	1-216-045-00	METAL	680 5% 1/10W	R560	1-216-041-00	METAL	470 5% 1/10W
R490	1-216-041-00	METAL	470 5% 1/10W	R561	1-216-001-00	METAL	10 5% 1/10W
R491	1-216-053-00	METAL	1.5K 5% 1/10W	R563	1-216-001-00	METAL	10 5% 1/10W
R493	1-216-061-00	METAL	3.3K 5% 1/10W	R564	1-216-001-00	METAL	10 5% 1/10W
R494	1-216-071-00	METAL	8.2K 5% 1/10W	R565	1-216-001-00	METAL	10 5% 1/10W
R495	1-216-073-00	METAL	10K 5% 1/10W	R566	1-216-001-00	METAL	10 5% 1/10W
R496	1-216-073-00	METAL	10K 5% 1/10W	R567	1-216-001-00	METAL	10 5% 1/10W
R497	1-216-073-00	METAL	10K 5% 1/10W	R568	1-216-051-00	METAL	1.2K 5% 1/10W
R498	1-216-073-00	METAL	10K 5% 1/10W	R569	1-216-063-00	METAL	3.9K 5% 1/10W
R499	1-216-077-00	METAL	15K 5% 1/10W	R570	1-216-051-00	METAL	1.2K 5% 1/10W
R501	1-216-057-00	METAL	2.2K 5% 1/10W	R571	1-216-061-00	METAL	3.3K 5% 1/10W
R502	1-216-057-00	METAL	2.2K 5% 1/10W	R572	1-216-041-00	METAL	470 5% 1/10W
R503	1-216-057-00	METAL	2.2K 5% 1/10W	R573	1-216-022-00	METAL	75 5% 1/10W
R505	1-216-033-00	METAL	220 5% 1/10W	R575	1-216-041-00	METAL	470 5% 1/10W
R506	1-216-033-00	METAL	220 5% 1/10W	R576	1-216-041-00	METAL	470 5% 1/10W
R507	1-216-033-00	METAL	220 5% 1/10W	R577	1-216-053-00	METAL	1.5K 5% 1/10W
R508	1-216-033-00	METAL	220 5% 1/10W	R578	1-216-081-00	METAL	22K 5% 1/10W
R509	1-216-057-00	METAL	2.2K 5% 1/10W	R579	1-216-081-00	METAL	22K 5% 1/10W
R510	1-216-057-00	METAL	2.2K 5% 1/10W	R581	1-216-055-00	METAL	1.8K 5% 1/10W
R511	1-216-057-00	METAL	2.2K 5% 1/10W	R582	1-216-053-00	METAL	1.5K 5% 1/10W
R512	1-216-033-00	METAL	220 5% 1/10W	R583	1-216-053-00	METAL	1.5K 5% 1/10W
R514	1-216-057-00	METAL	2.2K 5% 1/10W	R584	1-216-059-00	METAL	2.7K 5% 1/10W
R515	1-216-033-00	METAL	220 5% 1/10W	R585	1-216-053-00	METAL	1.5K 5% 1/10W
R516	1-216-033-00	METAL	220 5% 1/10W	R586	1-216-022-00	METAL	75 5% 1/10W
R517	1-216-033-00	METAL	220 5% 1/10W	R587	1-216-073-00	METAL	10K 5% 1/10W
R518	1-216-033-00	METAL	220 5% 1/10W	R590	1-216-037-00	METAL	330 5% 1/10W
R519	1-216-057-00	METAL	2.2K 5% 1/10W	R591	1-216-037-00	METAL	330 5% 1/10W
R520	1-216-033-00	METAL	220 5% 1/10W	R601	1-216-049-00	METAL	1K 5% 1/10W
R521	1-216-033-00	METAL	220 5% 1/10W	R602	1-216-063-00	METAL	3.9K 5% 1/10W
R522	1-216-057-00	METAL	2.2K 5% 1/10W	R603	1-216-059-00	METAL	2.7K 5% 1/10W
R523	1-216-057-00	METAL	2.2K 5% 1/10W	R604	1-216-051-00	METAL	1.2K 5% 1/10W
R524	1-216-057-00	METAL	2.2K 5% 1/10W	R605	1-216-047-00	METAL	820 5% 1/10W
R525	1-216-295-11	METAL	0 5% 1/10W	R606	1-216-041-00	METAL	470 5% 1/10W
R527	1-216-057-00	METAL	2.2K 5% 1/10W	R607	1-216-041-00	METAL	470 5% 1/10W
R528	1-216-033-00	METAL	220 5% 1/10W	R632	1-216-295-11	METAL	0 5% 1/10W
R529	1-216-057-00	METAL	2.2K 5% 1/10W	R633	1-216-295-11	METAL	0 5% 1/10W
R530	1-216-049-00	METAL	1K 5% 1/10W	R634	1-216-295-11	METAL	0 5% 1/10W
R531	1-216-057-00	METAL	2.2K 5% 1/10W	R901	1-216-049-00	METAL	1K 5% 1/10W
R532	1-216-049-00	METAL	1K 5% 1/10W	R902	1-216-049-00	METAL	1K 5% 1/10W

VA-76 **VA-76(B)**

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
R903	1-216-057-00	METAL	2.2K	5%	1/10W	C123	1-163-239-11	CERAMIC	33PF	5%	50V
R905	1-216-057-00	METAL	2.2K	5%	1/10W	C124	1-163-099-00	CERAMIC	18PF	5%	50V
R906	1-216-033-00	METAL	220	5%	1/10W	C125	1-164-004-11	CERAMIC	0.1uF	10%	25V
R907	1-216-057-00	METAL	2.2K	5%	1/10W	C126	1-163-141-00	CERAMIC	0.001uF	5%	50V
R908	1-216-057-00	METAL	2.2K	5%	1/10W	C127	1-163-038-91	CERAMIC	0.1uF		25V
R910	1-216-073-00	METAL	10K	5%	1/10W	C128	1-163-275-11	CERAMIC	0.001uF	5%	50V
R911	1-216-073-00	METAL	10K	5%	1/10W	C129	1-163-275-11	CERAMIC	0.001uF	5%	50V
R915	1-216-049-00	METAL	1K	5%	1/10W	C130	1-163-257-11	CERAMIC	180PF	5%	50V
R916	1-216-057-00	METAL	2.2K	5%	1/10W	C131	1-126-217-11	ELECT	15uF	20%	10V
R917	1-216-049-00	METAL	1K	5%	1/10W	C132	1-163-038-91	CERAMIC	0.1uF		25V
R934	1-216-041-00	METAL	470	5%	1/10W	C133	1-163-275-11	CERAMIC	0.001uF	5%	50V
R935	1-216-055-00	METAL	1.8K	5%	1/10W	C134	1-165-320-11	CERAMIC	0.47uF	10%	16V
R936	1-216-055-00	METAL	1.8K	5%	1/10W	C135	1-126-217-11	ELECT	15uF	20%	10V
R937	1-216-045-00	METAL	680	5%	1/10W	C136	1-163-038-91	CERAMIC	0.1uF		25V
R938	1-216-045-00	METAL	680	5%	1/10W	C137	1-164-182-11	CERAMIC	0.0033uF	10%	50V
R939	1-216-041-00	METAL	470	5%	1/10W	C138	1-163-251-11	CERAMIC	100PF	5%	50V
R941	1-216-295-11	METAL	0	5%	1/10W	C139	1-163-038-91	CERAMIC	0.1uF		25V
R943	1-216-295-11	METAL	0	5%	1/10W	C140	1-163-038-91	CERAMIC	0.1uF		25V
R945	1-216-295-11	METAL	0	5%	1/10W	C141	1-164-004-11	CERAMIC	0.1uF	10%	25V
R950	1-216-041-00	METAL	470	5%	1/10W	C143	1-126-217-11	ELECT	15uF	20%	10V
R951	1-216-097-00	METAL	100K	5%	1/10W	C144	1-163-275-11	CERAMIC	0.001uF	5%	50V
R952	1-216-065-00	METAL	4.7K	5%	1/10W	C145	1-164-232-11	CERAMIC	0.01uF	10%	50V
R954	1-216-065-00	METAL	4.7K	5%	1/10W	C146	1-164-232-11	CERAMIC	0.01uF	10%	50V
R955	1-216-295-11	METAL	0	5%	1/10W	C147	1-164-004-11	CERAMIC	0.1uF	10%	25V
R956	1-216-295-11	METAL	0	5%	1/10W	C148	1-163-275-11	CERAMIC	0.001uF	5%	50V
R957	1-216-295-11	METAL	0	5%	1/10W	C149	1-164-004-11	CERAMIC	0.1uF	10%	25V
R960	1-216-059-00	METAL	2.7K	5%	1/10W	C150	1-164-346-11	CERAMIC	1uF		16V
R982	1-216-049-00	METAL	1K	5%	1/10W	C151	1-163-038-91	CERAMIC	0.1uF		25V
R983	1-216-049-00	METAL	1K	5%	1/10W	C152	1-163-251-11	CERAMIC	100PF	5%	50V
R984	1-216-049-00	METAL	1K	5%	1/10W	C153	1-126-217-11	ELECT	15uF	20%	10V
<VARIABLE RESISTOR>											
RV301	1-238-852-11	RES, ADJ, CERMET	470			C154	1-163-038-91	CERAMIC	0.1uF		25V
RV302	1-238-852-11	RES, ADJ, CERMET	470			C155	1-163-038-91	CERAMIC	0.1uF		25V
RV303	1-238-852-11	RES, ADJ, CERMET	470			C156	1-163-038-91	CERAMIC	0.1uF		25V
RV304	1-238-852-11	RES, ADJ, CERMET	470			C157	1-126-217-11	ELECT	15uF	20%	10V
<CRYSTAL>											
X101	1-579-738-21	VIBRATOR, CRYSTAL				C158	1-164-346-11	CERAMIC	1uF		16V
X301	1-579-466-11	VIBRATOR, CRYSTAL				C159	1-163-038-91	CERAMIC	0.1uF		25V

*A-8274-835-A VA-76 (B) BOARD, COMPLETE (UP-1200AEPM)											

<CAPACITOR>											
C101	1-163-038-91	CERAMIC	0.1uF		25V	C169	1-163-038-91	CERAMIC	0.1uF		25V
C102	1-164-004-11	CERAMIC	0.1uF	10%	25V	C173	1-163-038-91	CERAMIC	0.1uF		25V
C103	1-124-778-00	ELECT	22uF	20%	6.3V	C175	1-163-038-91	CERAMIC	0.1uF		25V
C104	1-163-038-91	CERAMIC	0.1uF		25V	C176	1-126-217-11	ELECT	15uF	20%	10V
C106	1-164-346-11	CERAMIC	1uF		16V	C177	1-163-038-91	CERAMIC	0.1uF		25V
C107	1-163-275-11	CERAMIC	0.001uF	5%	50V	C180	1-163-141-00	CERAMIC	0.001uF	5%	50V
C108	1-126-217-11	ELECT	15uF	20%	10V	C181	1-163-099-00	CERAMIC	18PF	5%	50V
C109	1-163-038-91	CERAMIC	0.1uF		25V	C182	1-163-038-91	CERAMIC	0.1uF		25V
C110	1-163-110-00	CERAMIC	51PF	5%	50V	C183	1-163-038-91	CERAMIC	0.1uF		25V
C111	1-163-097-00	CERAMIC	15PF	5%	50V	C185	1-163-038-91	CERAMIC	0.1uF		25V
C112	1-163-253-11	CERAMIC	120PF	5%	50V	C187	1-163-038-91	CERAMIC	0.1uF		25V
C114	1-163-275-11	CERAMIC	0.001uF	5%	50V	C188	1-164-232-11	CERAMIC	0.01uF	10%	50V
C115	1-124-778-00	ELECT	22uF	20%	6.3V	C190	1-163-017-00	CERAMIC	0.0047uF	10%	50V
C116	1-163-038-91	CERAMIC	0.1uF		25V	C191	1-163-137-00	CERAMIC	680PF	5%	50V
C117	1-126-217-11	ELECT	15uF	20%	10V	C192	1-164-232-11	CERAMIC	0.01uF	10%	50V
C118	1-163-038-91	CERAMIC	0.1uF		25V	C193	1-126-217-11	ELECT	15uF	20%	10V
C119	1-163-038-91	CERAMIC	0.1uF		25V	C194	1-164-232-11	CERAMIC	0.01uF	10%	50V
C120	1-163-141-00	CERAMIC	0.001uF	5%	50V	C195	1-126-217-11	ELECT	15uF	20%	10V
C121	1-163-141-00	CERAMIC	0.001uF	5%	50V	C196	1-164-232-11	CERAMIC	0.01uF	10%	50V
C122	1-163-141-00	CERAMIC	0.001uF	5%	50V	C197	1-164-232-11	CERAMIC	0.01uF	10%	50V

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remark</u>	
C199	1-126-217-11	ELECT	15uF	20%	10V	C323	1-163-038-91	CERAMIC	0.1uF	25V
C200	1-126-217-11	ELECT	15uF	20%	10V	C324	1-163-038-91	CERAMIC	0.1uF	25V
C201	1-163-141-00	CERAMIC	0.001uF	5%	50V	C325	1-163-117-00	CERAMIC	100PF	5% 50V
C202	1-126-603-11	ELECT	4.7uF	20%	35V	C326	1-163-117-00	CERAMIC	100PF	5% 50V
C205	1-163-038-91	CERAMIC	0.1uF		25V	C327	1-126-193-11	ELECT	1uF	20% 50V
C206	1-164-005-11	CERAMIC	0.47uF		25V	C328	1-163-141-00	CERAMIC	0.001uF	5% 50V
C207	1-163-038-91	CERAMIC	0.1uF		25V	C329	1-164-004-11	CERAMIC	0.1uF	10% 25V
C209	1-126-217-11	ELECT	15uF	20%	10V	C330	1-164-005-11	CERAMIC	0.47uF	25V
C210	1-164-005-11	CERAMIC	0.47uF		25V	C331	1-164-004-11	CERAMIC	0.1uF	10% 25V
C211	1-164-005-11	CERAMIC	0.47uF		25V	C332	1-163-038-91	CERAMIC	0.1uF	25V
C212	1-163-038-91	CERAMIC	0.1uF		25V	C333	1-164-232-11	CERAMIC	0.01uF	10% 50V
C213	1-126-217-11	ELECT	15uF	20%	10V	C334	1-164-004-11	CERAMIC	0.1uF	10% 25V
C214	1-163-038-91	CERAMIC	0.1uF		25V	C335	1-126-217-11	ELECT	15uF	20% 10V
C215	1-164-005-11	CERAMIC	0.47uF		25V	C336	1-163-038-91	CERAMIC	0.1uF	25V
C216	1-126-193-11	ELECT	1uF	20%	50V	C337	1-163-227-11	CERAMIC	10PF	50V
C217	1-164-005-11	CERAMIC	0.47uF		25V	C338	1-164-004-11	CERAMIC	0.1uF	10% 25V
C218	1-163-235-11	CERAMIC	22PF	5%	50V	C339	1-126-217-11	ELECT	15uF	20% 10V
C220	1-164-005-11	CERAMIC	0.47uF		25V	C340	1-163-038-91	CERAMIC	0.1uF	25V
C221	1-164-005-11	CERAMIC	0.47uF		25V	C341	1-126-217-11	ELECT	15uF	20% 10V
C223	1-164-005-11	CERAMIC	0.47uF		25V	C342	1-163-038-91	CERAMIC	0.1uF	25V
C224	1-164-005-11	CERAMIC	0.47uF		25V	C343	1-126-217-11	ELECT	15uF	20% 10V
C225	1-126-217-11	ELECT	15uF	20%	10V	C344	1-163-038-91	CERAMIC	0.1uF	25V
C226	1-163-038-91	CERAMIC	0.1uF		25V	C345	1-126-217-11	ELECT	15uF	20% 10V
C227	1-164-005-11	CERAMIC	0.47uF		25V	C346	1-163-038-91	CERAMIC	0.1uF	25V
C228	1-163-251-11	CERAMIC	100PF	5%	50V	C347	1-163-227-11	CERAMIC	10PF	50V
C230	1-163-038-91	CERAMIC	0.1uF		25V	C348	1-164-004-11	CERAMIC	0.1uF	10% 25V
C233	1-163-133-00	CERAMIC	470PF	5%	50V	C349	1-128-065-11	ELECT	68uF	20% 10V
C250	1-163-127-00	CERAMIC	270PF	5%	50V	C350	1-163-038-91	CERAMIC	0.1uF	25V
C251	1-163-110-00	CERAMIC	51PF	5%	50V	C351	1-126-217-11	ELECT	15uF	20% 10V
C252	1-126-217-11	ELECT	15uF	20%	10V	C352	1-163-038-91	CERAMIC	0.1uF	25V
C260	1-164-004-11	CERAMIC	0.1uF	10%	25V	C353	1-163-809-11	CERAMIC	0.047uF	10% 25V
C261	1-163-097-00	CERAMIC	15PF	5%	50V	C354	1-163-037-11	CERAMIC	0.022uF	10% 25V
C262	1-163-141-00	CERAMIC	0.001uF	5%	50V	C355	1-163-038-91	CERAMIC	0.1uF	25V
C263	1-163-141-00	CERAMIC	0.001uF	5%	50V	C356	1-163-809-11	CERAMIC	0.047uF	10% 25V
C270	1-135-337-11	TANTAL	1uF	10%	6.3V	C357	1-107-682-11	CERAMIC	1uF	10% 16V
C271	1-126-217-11	ELECT	15uF	20%	10V	C358	1-164-004-11	CERAMIC	0.1uF	10% 25V
C281	1-126-207-11	ELECT	33uF	20%	4V	C359	1-126-193-11	ELECT	1uF	20% 50V
C282	1-126-217-11	ELECT	15uF	20%	10V	C360	1-163-106-00	CERAMIC	36PF	5% 50V
C285	1-164-005-11	CERAMIC	0.47uF		25V	C362	1-164-005-11	CERAMIC	0.47uF	25V
C286	1-164-005-11	CERAMIC	0.47uF		25V	C363	1-128-065-11	ELECT	68uF	20% 10V
C290	1-164-005-11	CERAMIC	0.47uF		25V	C364	1-163-038-91	CERAMIC	0.1uF	25V
C291	1-164-005-11	CERAMIC	0.47uF		25V	C366	1-163-235-11	CERAMIC	22PF	5% 50V
C295	1-164-004-11	CERAMIC	0.1uF	10%	25V	C367	1-126-217-11	ELECT	15uF	20% 10V
C301	1-126-217-11	ELECT	15uF	20%	10V	C368	1-163-038-91	CERAMIC	0.1uF	25V
C302	1-163-038-91	CERAMIC	0.1uF		25V	C369	1-126-217-11	ELECT	15uF	20% 10V
C303	1-163-077-00	CERAMIC	0.1uF	10%	25V	C370	1-163-038-91	CERAMIC	0.1uF	25V
C304	1-163-077-00	CERAMIC	0.1uF	10%	25V	C371	1-164-004-11	CERAMIC	0.1uF	10% 25V
C305	1-163-038-91	CERAMIC	0.1uF		25V	C372	1-126-193-11	ELECT	1uF	20% 50V
C306	1-164-004-11	CERAMIC	0.1uF	10%	25V	C373	1-163-227-11	CERAMIC	10PF	50V
C307	1-126-217-11	ELECT	15uF	20%	10V	C374	1-164-004-11	CERAMIC	0.1uF	10% 25V
C308	1-164-346-11	CERAMIC	1uF		16V	C375	1-163-038-91	CERAMIC	0.1uF	25V
C309	1-126-217-11	ELECT	15uF	20%	10V	C376	1-164-232-11	CERAMIC	0.01uF	10% 50V
C310	1-163-038-91	CERAMIC	0.1uF		25V	C377	1-135-145-11	TANTAL	0.47uF	20% 25V
C311	1-163-038-91	CERAMIC	0.1uF		25V	C378	1-126-217-11	ELECT	15uF	20% 10V
C312	1-126-217-11	ELECT	15uF	20%	10V	C379	1-163-038-91	CERAMIC	0.1uF	25V
C313	1-163-038-91	CERAMIC	0.1uF		25V	C380	1-126-217-11	ELECT	15uF	20% 10V
C314	1-126-217-11	ELECT	15uF	20%	10V	C381	1-163-245-11	CERAMIC	56PF	5% 50V
C315	1-126-217-11	ELECT	15uF	20%	10V	C382	1-135-210-11	TANTAL	4.7uF	10% 10V
C316	1-126-217-11	ELECT	15uF	20%	10V	C383	1-163-038-91	CERAMIC	0.1uF	25V
C317	1-126-217-11	ELECT	15uF	20%	10V	C384	1-163-038-91	CERAMIC	0.1uF	25V
C318	1-126-217-11	ELECT	15uF	20%	10V	C385	1-163-038-91	CERAMIC	0.1uF	25V
C319	1-163-038-91	CERAMIC	0.1uF		25V	C386	1-164-232-11	CERAMIC	0.01uF	10% 50V
C320	1-164-346-11	CERAMIC	1uF		16V	C387	1-163-038-91	CERAMIC	0.1uF	25V
C321	1-126-217-11	ELECT	15uF	20%	10V	C388	1-126-217-11	ELECT	15uF	20% 10V
C322	1-126-217-11	ELECT	15uF	20%	10V	C389	1-163-038-91	CERAMIC	0.1uF	25V

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Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark				
C390	1-163-038-91	CERAMIC	0.1uF	25V	C901	1-163-239-11	CERAMIC	33PF	5%	50V	
C391	1-163-099-00	CERAMIC	18PF	5%	C902	1-163-239-11	CERAMIC	33PF	5%	50V	
C393	1-163-038-91	CERAMIC	0.1uF	25V	C903	1-163-239-11	CERAMIC	33PF	5%	50V	
C394	1-128-065-11	ELECT	68uF	20%	C910	1-135-210-11	TANTAL	4.7uF	10%	10V	
C395	1-163-038-91	CERAMIC	0.1uF	25V	C911	1-135-210-11	TANTAL	4.7uF	10%	10V	
C396	1-126-217-11	ELECT	15uF	20%	10V	C950	1-163-127-00	CERAMIC	270PF	5%	50V
C397	1-164-232-11	CERAMIC	0.01uF	10%	50V	C951	1-163-239-11	CERAMIC	33PF	5%	50V
C398	1-163-038-91	CERAMIC	0.1uF	25V	C990	1-126-217-11	ELECT	15uF	20%	10V	
C399	1-164-004-11	CERAMIC	0.1uF	10%	25V						
C400	1-164-005-11	CERAMIC	0.47uF	25V							
C401	1-164-004-11	CERAMIC	0.1uF	10%	25V	CN101	1-565-212-11	CONNECTOR, FPC (ZIF)	26P		
C402	1-164-004-11	CERAMIC	0.1uF	10%	25V	CN102	1-565-212-11	CONNECTOR, FPC (ZIF)	26P		
C404	1-163-038-91	CERAMIC	0.1uF	25V	CN105	*1-560-892-00	PIN, CONNECTOR	4P			
C410	1-163-243-11	CERAMIC	47PF	5%	50V	CN110	1-506-472-11	PIN, CONNECTOR	7P		
C482	1-163-251-11	CERAMIC	100PF	5%	50V	CN502	1-506-471-11	PIN, CONNECTOR	6P		
C490	1-163-227-11	CERAMIC	10PF	50V							
C499	1-163-235-11	CERAMIC	22PF	5%	50V						
C501	1-126-217-11	ELECT	15uF	20%	10V	CT101	1-141-423-61	CAP, ADJ			
C502	1-163-038-91	CERAMIC	0.1uF	25V	CT102	1-141-423-61	CAP, ADJ				
C503	1-163-038-91	CERAMIC	0.1uF	25V	CT103	1-141-373-11	CAP, CHIP TRIMMER				
C504	1-126-217-11	ELECT	15uF	20%	10V						
C505	1-163-239-11	CERAMIC	33PF	5%	50V						
C506	1-163-239-11	CERAMIC	33PF	5%	50V	D101	8-719-002-81	DIODE 1T363A			
C507	1-163-038-91	CERAMIC	0.1uF	25V	D109	8-719-820-41	DIODE 1SS302				
C508	1-163-038-91	CERAMIC	0.1uF	25V	D110	8-719-820-41	DIODE 1SS302				
C509	1-126-217-11	ELECT	15uF	20%	10V	D120	8-719-002-81	DIODE 1T363A			
C512	1-163-038-91	CERAMIC	0.1uF	25V	D125	8-719-024-82	DIODE 1SS300				
C513	1-164-005-11	CERAMIC	0.47uF	25V	D126	8-719-421-27	DIODE MA728				
C514	1-163-038-91	CERAMIC	0.1uF	25V	D301	8-719-820-41	DIODE 1SS302				
C515	1-163-038-91	CERAMIC	0.1uF	25V	D302	8-719-820-41	DIODE 1SS302				
C516	1-126-217-11	ELECT	15uF	20%	10V	D310	8-719-820-41	DIODE 1SS302			
C517	1-163-038-91	CERAMIC	0.1uF	25V	D311	8-719-820-41	DIODE 1SS302				
C518	1-164-232-11	CERAMIC	0.01uF	10%	50V	D312	8-719-820-41	DIODE 1SS302			
C519	1-164-232-11	CERAMIC	0.01uF	10%	50V	D313	8-719-820-41	DIODE 1SS302			
C520	1-163-809-11	CERAMIC	0.047uF	10%	25V	D503	8-719-820-41	DIODE 1SS302			
C521	1-163-809-11	CERAMIC	0.047uF	10%	25V	D508	8-719-820-41	DIODE 1SS302			
C522	1-163-809-11	CERAMIC	0.047uF	10%	25V	D509	8-719-820-41	DIODE 1SS302			
C523	1-164-232-11	CERAMIC	0.01uF	10%	50V	D910	8-719-025-18	DIODE 02CZ2.0-TE85L			
C524	1-164-005-11	CERAMIC	0.47uF	25V	D911	8-719-025-18	DIODE 02CZ2.0-TE85L				
C525	1-126-217-11	ELECT	15uF	20%	10V	D912	8-719-025-18	DIODE 02CZ2.0-TE85L			
C526	1-126-217-11	ELECT	15uF	20%	10V						
C527	1-163-038-91	CERAMIC	0.1uF	25V							
C528	1-163-038-91	CERAMIC	0.1uF	25V	DL301	1-406-516-11	DELAY LINE, LC (140NS) (EQ)				
C529	1-163-038-91	CERAMIC	0.1uF	25V	DL302	1-239-565-11	FILTER, LOW PASS				
C530	1-126-217-11	ELECT	15uF	20%	10V	DL303	1-403-694-11	COIL			
C531	1-163-038-91	CERAMIC	0.1uF	25V							
C532	1-126-217-11	ELECT	15uF	20%	10V						
C533	1-163-038-91	CERAMIC	0.1uF	25V	FB108	1-412-390-21	INDUCTOR CHIP OUE				
C534	1-126-217-11	ELECT	15uF	20%	10V	FB109	1-412-390-21	INDUCTOR CHIP OUE			
C535	1-163-038-91	CERAMIC	0.1uF	25V	FB112	1-412-390-21	INDUCTOR CHIP OUE				
C536	1-164-005-11	CERAMIC	0.47uF	25V	FB121	1-412-390-21	INDUCTOR CHIP OUE				
C537	1-164-005-11	CERAMIC	0.47uF	25V	FB122	1-412-390-21	INDUCTOR CHIP OUE				
C538	1-126-217-11	ELECT	15uF	20%	10V	FB123	1-412-390-21	INDUCTOR CHIP OUE			
C539	1-164-232-11	CERAMIC	0.01uF	10%	50V	FB304	1-412-390-21	INDUCTOR CHIP OUE			
C540	1-164-232-11	CERAMIC	0.01uF	10%	50V	FB305	1-412-390-21	INDUCTOR CHIP OUE			
C541	1-164-232-11	CERAMIC	0.01uF	10%	50V	FB306	1-412-390-21	INDUCTOR CHIP OUE			
C543	1-163-235-11	CERAMIC	22PF	5%	50V	FB307	1-412-390-21	INDUCTOR CHIP OUE			
C544	1-164-004-11	CERAMIC	0.1uF	10%	25V	FB308	1-412-390-21	INDUCTOR CHIP OUE			
C545	1-126-217-11	ELECT	15uF	20%	10V	FB309	1-412-390-21	INDUCTOR CHIP OUE			
C546	1-163-038-91	CERAMIC	0.1uF	25V	FB310	1-412-390-21	INDUCTOR CHIP OUE				
C547	1-163-038-91	CERAMIC	0.1uF	25V	FB311	1-412-390-21	INDUCTOR CHIP OUE				
C570	1-163-038-91	CERAMIC	0.1uF	25V	FB312	1-412-390-21	INDUCTOR CHIP OUE				
C571	1-126-217-11	ELECT	15uF	20%	10V	FB313	1-412-390-21	INDUCTOR CHIP OUE			
C572	1-126-217-11	ELECT	15uF	20%	10V	FB314	1-412-390-21	INDUCTOR CHIP OUE			
C801	1-164-004-11	CERAMIC	0.1uF	10%	25V	FB315	1-412-390-21	INDUCTOR CHIP OUE			

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
FB316	1-412-390-21	INDUCTOR CHIP OUE		IC109	8-759-242-70	IC TC7WU04F	
FB317	1-412-390-21	INDUCTOR CHIP OUE		IC110	8-759-907-81	IC SN74LS221NS	
FB318	1-412-390-21	INDUCTOR CHIP OUE		IC111	8-759-981-48	IC TL082CPS	
FB319	1-412-390-21	INDUCTOR CHIP OUE		IC112	8-759-011-65	IC MC74HC4053F	
FB320	1-412-390-21	INDUCTOR CHIP OUE		IC113	8-759-157-22	IC PQ06TZ1U	
FB321	1-412-390-21	INDUCTOR CHIP OUE		IC114	8-759-157-17	IC PQ05SZ1U	
FB322	1-412-390-21	INDUCTOR CHIP OUE		IC119	8-759-097-87	IC MB621948	
FB323	1-412-390-21	INDUCTOR CHIP OUE		IC121	8-752-372-78	IC CXD2024AQ	
FB324	1-412-390-21	INDUCTOR CHIP OUE		IC122	8-759-710-86	IC NJM2233BM	
FB325	1-412-390-21	INDUCTOR CHIP OUE		IC123	8-759-710-07	IC NJM2234M	
FB327	1-412-390-21	INDUCTOR CHIP OUE		IC125	8-759-710-86	IC NJM2233BM	
FB328	1-412-390-21	INDUCTOR CHIP OUE		IC126	8-759-242-64	IC TC4W53F	
FB329	1-412-390-21	INDUCTOR CHIP OUE		IC128	8-759-242-72	IC TC7W0OF	
FB330	1-412-390-21	INDUCTOR CHIP OUE		IC130	8-752-341-58	IC CXD1217Q	
FB331	1-412-390-21	INDUCTOR CHIP OUE		IC150	8-759-242-76	IC TC7W08F	
FB332	1-412-390-21	INDUCTOR CHIP OUE		IC301	8-752-054-80	IC CXA1521M	
FB334	1-412-390-21	INDUCTOR CHIP OUE		IC302	8-759-011-65	IC MC74HC4053F	
FB335	1-412-390-21	INDUCTOR CHIP OUE		IC303	8-759-060-00	IC BA10324AF	
FB336	1-412-390-21	INDUCTOR CHIP OUE		IC304	8-759-060-00	IC BA10324AF	
FB337	1-412-390-21	INDUCTOR CHIP OUE		IC306	8-759-105-49	IC UPC319G2	
FB338	1-412-390-21	INDUCTOR CHIP OUE		IC307	8-759-635-27	IC M62352GP	
FB339	1-412-390-21	INDUCTOR CHIP OUE		IC308	8-759-635-27	IC M62352GP	
FB340	1-412-390-21	INDUCTOR CHIP OUE		IC309	8-759-278-57	IC AK6420HF-E2	
FB343	1-412-390-21	INDUCTOR CHIP OUE		IC310	8-752-340-25	IC CXL5505M	
FB344	1-412-390-21	INDUCTOR CHIP OUE		IC311	8-752-058-96	IC CXA1585Q	
FB345	1-412-390-21	INDUCTOR CHIP OUE		IC312	8-759-929-26	IC TL431CPS	
FB346	1-412-390-21	INDUCTOR CHIP OUE		IC313	8-759-745-64	IC NJM4560M	
FB347	1-412-390-21	INDUCTOR CHIP OUE		IC314	8-759-060-00	IC BA10324AF	
FB348	1-412-390-21	INDUCTOR CHIP OUE		IC320	8-759-745-64	IC NJM4560M	
FB349	1-412-390-21	INDUCTOR CHIP OUE		IC501	8-759-011-65	IC MC74HC4053F	
FB510	1-412-390-21	INDUCTOR CHIP OUE		IC504	8-759-254-98	IC M50555-218FP-TE2	
FB511	1-412-390-21	INDUCTOR CHIP OUE		IC506	8-752-033-07	IC CXA1145M	
FB512	1-412-390-21	INDUCTOR CHIP OUE		IC507	8-752-053-21	IC CXA1211M	
FB920	1-412-390-21	INDUCTOR CHIP OUE		IC508	8-759-710-86	IC NJM2233BM	
FB921	1-412-390-21	INDUCTOR CHIP OUE		IC511	8-752-053-21	IC CXA1211M	
FB922	1-412-390-21	INDUCTOR CHIP OUE				<JACK>	
<FILTER>				J101	1-565-276-21	JACK, ULTRA SMALL 1P	
FL102	1-236-388-11	FILTER, EMI				<INDUCTOR>	
FL103	1-236-388-11	FILTER, EMI		L101	1-410-389-31	INDUCTOR CHIP 47UH	
FL104	1-236-388-11	FILTER, EMI		L102	1-410-388-31	INDUCTOR CHIP 39UH	
FL105	1-236-388-11	FILTER, EMI		L103	1-412-137-11	INDUCTOR 10UH	
FL106	1-236-388-11	FILTER, EMI		L110	1-410-200-31	INDUCTOR CHIP 4.7UH	
FL107	1-236-388-11	FILTER, EMI		L120	1-410-385-11	INDUCTOR CHIP 22UH	
FL201	1-239-839-11	FILTER, LOW PASS		L130	1-410-385-11	INDUCTOR CHIP 22UH	
FL202	1-236-265-11	FILTER, BAND PASS		L140	1-410-385-11	INDUCTOR CHIP 22UH	
FL203	1-239-564-11	FILTER, LOW PASS		L141	1-410-385-11	INDUCTOR CHIP 22UH	
FL301	1-239-564-11	FILTER, LOW PASS		L301	1-410-377-31	INDUCTOR CHIP 4.7UH	
FL304	1-406-515-11	DELAY LINE, LC		L302	1-410-389-31	INDUCTOR CHIP 47UH	
FL501	1-239-563-11	FILTER, LOW PASS		L303	1-410-388-31	INDUCTOR CHIP 39UH	
FL502	1-239-563-11	FILTER, LOW PASS		L350	1-410-377-31	INDUCTOR CHIP 4.7UH	
FL503	1-239-563-11	FILTER, LOW PASS		L501	1-410-384-31	INDUCTOR CHIP 18UH	
FL504	1-239-564-11	FILTER, LOW PASS		L901	1-410-730-11	INDUCTOR CHIP 0.12UH	
FL505	1-236-265-11	FILTER, BAND PASS		L902	1-410-730-11	INDUCTOR CHIP 0.12UH	
<IC>				L903	1-410-730-11	INDUCTOR CHIP 0.12UH	
IC101	8-759-079-66	IC TC74VHC123AFS		L904	1-412-188-11	INDUCTOR 22UH	
IC102	8-759-105-49	IC UPC319G2		L905	1-412-188-11	INDUCTOR 22UH	
IC103	8-759-085-67	IC LM339NS				<FILTER>	
IC104	8-759-996-43	IC RC4558PS		LF101	1-424-090-11	COIL, LINE FILTER	
IC106	8-759-710-12	IC NJM2230M		LF102	1-424-090-11	COIL, LINE FILTER	
IC107	8-752-326-08	IC CXD1159Q		LF106	1-424-090-11	COIL, LINE FILTER	
IC108	8-759-907-81	IC SN74LS221NS					

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Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark				
<TRANSISTOR>											
Q101	8-729-230-60	TRANSISTOR 2SA1586-YG		Q509	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L					
Q102	8-729-230-60	TRANSISTOR 2SA1586-YG		Q510	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L					
Q103	8-729-230-63	TRANSISTOR 2SC4116-YG		Q511	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q104	8-729-230-63	TRANSISTOR 2SC4116-YG		Q512	8-729-230-60	TRANSISTOR 2SA1586-YG					
Q105	8-729-230-63	TRANSISTOR 2SC4116-YG		Q513	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q106	8-729-120-28	TRANSISTOR 2SC1623-L5L6		Q514	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q108	8-729-230-63	TRANSISTOR 2SC4116-YG		Q515	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q109	8-729-230-63	TRANSISTOR 2SC4116-YG		Q516	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q110	8-729-230-63	TRANSISTOR 2SC4116-YG		Q517	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q111	8-729-230-63	TRANSISTOR 2SC4116-YG		Q518	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q112	8-729-230-60	TRANSISTOR 2SA1586-YG		Q519	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q113	8-729-402-87	TRANSISTOR XN2401		Q520	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q116	8-729-230-63	TRANSISTOR 2SC4116-YG		Q521	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q117	8-729-230-63	TRANSISTOR 2SC4116-YG		Q522	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q118	8-729-402-84	TRANSISTOR XN4601-TW		Q523	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q119	8-729-230-63	TRANSISTOR 2SC4116-YG		Q525	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q120	8-729-230-63	TRANSISTOR 2SC4116-YG		Q526	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q121	8-729-230-63	TRANSISTOR 2SC4116-YG		Q527	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q122	8-729-230-63	TRANSISTOR 2SC4116-YG		Q528	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L					
Q123	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		Q529	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L					
Q124	8-729-402-84	TRANSISTOR XN4601		Q530	8-729-230-60	TRANSISTOR 2SA1586-YG					
Q125	8-729-230-63	TRANSISTOR 2SC4116-YG		Q531	8-729-230-60	TRANSISTOR 2SA1586-YG					
Q126	8-729-402-84	TRANSISTOR XN4601		Q532	8-729-230-60	TRANSISTOR 2SA1586-YG					
Q170	8-729-230-60	TRANSISTOR 2SA1586-YG		Q540	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L					
Q171	8-729-013-88	TRANSISTOR RN1302-TE85L		Q901	8-729-230-60	TRANSISTOR 2SA1586-YG					
Q301	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		Q902	8-729-230-63	TRANSISTOR 2SC4116-YG					
Q302	8-729-230-63	TRANSISTOR 2SC4116-YG		Q910	8-729-230-60	TRANSISTOR 2SA1586-YG					
Q303	8-729-402-84	TRANSISTOR XN4601		<REGISTOR>							
Q304	8-729-402-84	TRANSISTOR XN4601		R101	1-216-051-00	METAL		1.2K	5%	1/10W	
Q305	8-729-230-63	TRANSISTOR 2SC4116-YG		R102	1-216-053-00	METAL		1.5K	5%	1/10W	
Q306	8-729-230-60	TRANSISTOR 2SA1586-YG		R103	1-216-053-00	METAL		1.5K	5%	1/10W	
Q307	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L		R104	1-216-113-00	METAL		470K	5%	1/10W	
Q308	8-729-230-63	TRANSISTOR 2SC4116-YG		R105	1-216-057-00	METAL		2.2K	5%	1/10W	
Q309	8-729-402-81	TRANSISTOR XN4501		R106	1-216-057-00	METAL		2.2K	5%	1/10W	
Q310	8-729-230-60	TRANSISTOR 2SA1586-YG		R107	1-216-065-00	METAL		4.7K	5%	1/10W	
Q311	8-729-402-81	TRANSISTOR XN4501		R108	1-216-057-00	METAL		2.2K	5%	1/10W	
Q312	8-729-230-63	TRANSISTOR 2SC4116-YG		R109	1-216-057-00	METAL		2.2K	5%	1/10W	
Q316	8-729-230-63	TRANSISTOR 2SC4116-YG		R110	1-216-053-00	METAL		1.5K	5%	1/10W	
Q320	8-729-230-63	TRANSISTOR 2SC4116-YG		R111	1-216-075-00	METAL		12K	5%	1/10W	
Q321	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R112	1-216-001-00	METAL		10	5%	1/10W	
Q322	8-729-230-63	TRANSISTOR 2SC4116-YG		R113	1-216-057-00	METAL		2.2K	5%	1/10W	
Q323	8-729-230-63	TRANSISTOR 2SC4116-YG		R114	1-216-065-00	METAL		4.7K	5%	1/10W	
Q324	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R115	1-216-057-00	METAL		2.2K	5%	1/10W	
Q326	8-729-230-63	TRANSISTOR 2SC4116-YG		R116	1-216-081-00	METAL		22K	5%	1/10W	
Q328	8-729-230-63	TRANSISTOR 2SC4116-YG		R117	1-216-049-00	METAL		1K	5%	1/10W	
Q329	8-729-230-63	TRANSISTOR 2SC4116-YG		R118	1-216-075-00	METAL		12K	5%	1/10W	
Q330	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R119	1-216-073-00	METAL		10K	5%	1/10W	
Q331	8-729-230-63	TRANSISTOR 2SC4116-YG		R120	1-216-075-00	METAL		12K	5%	1/10W	
Q334	8-729-230-63	TRANSISTOR 2SC4116-YG		R121	1-216-035-00	METAL		270	5%	1/10W	
Q335	8-729-014-86	TRANSISTOR 2SC4207-YGRTE85L		R122	1-216-295-11	METAL		0	5%	1/10W	
Q336	8-729-230-60	TRANSISTOR 2SA1586-YG		R123	1-216-049-00	METAL		1K	5%	1/10W	
Q350	8-729-230-63	TRANSISTOR 2SC4116-YG		R124	1-216-065-00	METAL		4.7K	5%	1/10W	
Q360	8-729-402-84	TRANSISTOR XN4601		R125	1-216-033-00	METAL		220	5%	1/10W	
Q361	8-729-230-63	TRANSISTOR 2SC4116-YG		R127	1-216-037-00	METAL		330	5%	1/10W	
Q400	8-729-230-63	TRANSISTOR 2SC4116-YG		R128	1-216-085-00	METAL		33K	5%	1/10W	
Q501	8-729-230-63	TRANSISTOR 2SC4116-YG		R129	1-216-069-00	METAL		6.8K	5%	1/10W	
Q502	8-729-230-63	TRANSISTOR 2SC4116-YG		R130	1-216-083-00	METAL		27K	5%	1/10W	
Q503	8-729-230-60	TRANSISTOR 2SA1586-YG		R131	1-216-073-00	METAL		10K	5%	1/10W	
Q504	8-729-230-60	TRANSISTOR 2SA1586-YG		R132	1-216-073-00	METAL		10K	5%	1/10W	
Q505	8-729-230-63	TRANSISTOR 2SC4116-YG		R133	1-216-097-00	METAL		100K	5%	1/10W	
Q506	8-729-230-63	TRANSISTOR 2SC4116-YG		R134	1-216-049-00	METAL		1K	5%	1/10W	
Q507	8-729-232-66	TRANSISTOR 2SA1618-YGRTE85L		R135	1-216-033-00	METAL		220	5%	1/10W	
Q508	8-729-230-63	TRANSISTOR 2SC4116-YG		R136	1-216-093-00	METAL		68K	5%	1/10W	

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
R137	1-216-053-00	METAL	1.5K 5% 1/10W	R214	1-216-057-00	METAL	2.2K 5% 1/10W
R138	1-216-051-00	METAL	1.2K 5% 1/10W	R216	1-216-041-00	METAL	470 5% 1/10W
R139	1-216-053-00	METAL	1.5K 5% 1/10W	R217	1-216-032-00	METAL	200 5% 1/10W
R140	1-216-295-11	METAL	0 5% 1/10W	R218	1-216-053-00	METAL	1.5K 5% 1/10W
R141	1-216-069-00	METAL	6.8K 5% 1/10W	R219	1-216-053-00	METAL	1.5K 5% 1/10W
R142	1-216-081-00	METAL	22K 5% 1/10W	R220	1-216-049-00	METAL	1K 5% 1/10W
R143	1-216-081-00	METAL	22K 5% 1/10W	R221	1-216-049-00	METAL	1K 5% 1/10W
R144	1-216-105-00	METAL	220K 5% 1/10W	R222	1-216-073-00	METAL	10K 5% 1/10W
R145	1-216-067-00	METAL	5.6K 5% 1/10W	R223	1-216-041-00	METAL	470 5% 1/10W
R146	1-216-055-00	METAL	1.8K 5% 1/10W	R224	1-216-049-00	METAL	1K 5% 1/10W
R147	1-216-057-00	METAL	2.2K 5% 1/10W	R225	1-216-053-00	METAL	1.5K 5% 1/10W
R148	1-216-057-00	METAL	2.2K 5% 1/10W	R227	1-216-053-00	METAL	1.5K 5% 1/10W
R149	1-216-063-00	METAL	3.9K 5% 1/10W	R228	1-216-049-00	METAL	1K 5% 1/10W
R150	1-216-057-00	METAL	2.2K 5% 1/10W	R229	1-216-053-00	METAL	1.5K 5% 1/10W
R151	1-216-043-00	METAL	560 5% 1/10W	R230	1-216-049-00	METAL	1K 5% 1/10W
R152	1-216-031-00	METAL	180 5% 1/10W	R231	1-216-051-00	METAL	1.2K 5% 1/10W
R153	1-216-043-00	METAL	560 5% 1/10W	R232	1-216-041-00	METAL	470 5% 1/10W
R154	1-216-057-00	METAL	2.2K 5% 1/10W	R233	1-216-061-00	METAL	3.3K 5% 1/10W
R155	1-216-093-00	METAL	68K 5% 1/10W	R234	1-216-295-11	METAL	0 5% 1/10W
R156	1-216-021-00	METAL	68 5% 1/10W	R235	1-216-053-00	METAL	1.5K 5% 1/10W
R157	1-216-057-00	METAL	2.2K 5% 1/10W	R236	1-216-053-00	METAL	1.5K 5% 1/10W
R158	1-216-061-00	METAL	3.3K 5% 1/10W	R237	1-216-049-00	METAL	1K 5% 1/10W
R159	1-216-057-00	METAL	2.2K 5% 1/10W	R238	1-216-049-00	METAL	1K 5% 1/10W
R160	1-216-065-00	METAL	4.7K 5% 1/10W	R239	1-216-033-00	METAL	220 5% 1/10W
R161	1-216-069-00	METAL	6.8K 5% 1/10W	R240	1-216-061-00	METAL	3.3K 5% 1/10W
R162	1-216-665-11	METAL	3.9K 0.50% 1/10W	R241	1-216-053-00	METAL	1.5K 5% 1/10W
R163	1-216-053-00	METAL	1.5K 5% 1/10W	R245	1-216-105-00	METAL	220K 5% 1/10W
R164	1-216-073-00	METAL	10K 5% 1/10W	R255	1-216-041-00	METAL	470 5% 1/10W
R165	1-216-065-00	METAL	4.7K 5% 1/10W	R260	1-216-057-00	METAL	2.2K 5% 1/10W
R166	1-216-047-00	METAL	820 5% 1/10W	R261	1-216-093-00	METAL	68K 5% 1/10W
R167	1-216-027-00	METAL	120 5% 1/10W	R262	1-216-037-00	METAL	330 5% 1/10W
R168	1-216-073-00	METAL	10K 5% 1/10W	R263	1-216-073-00	METAL	10K 5% 1/10W
R169	1-216-069-00	METAL	6.8K 5% 1/10W	R265	1-216-073-00	METAL	10K 5% 1/10W
R171	1-216-065-00	METAL	4.7K 5% 1/10W	R266	1-216-073-00	METAL	10K 5% 1/10W
R172	1-216-057-00	METAL	2.2K 5% 1/10W	R268	1-216-037-00	METAL	330 5% 1/10W
R173	1-216-053-00	METAL	1.5K 5% 1/10W	R269	1-216-295-11	METAL	0 5% 1/10W
R175	1-216-049-00	METAL	1K 5% 1/10W	R272	1-216-065-00	METAL	4.7K 5% 1/10W
R176	1-216-041-00	METAL	470 5% 1/10W	R273	1-216-105-00	METAL	220K 5% 1/10W
R177	1-216-049-00	METAL	1K 5% 1/10W	R274	1-216-073-00	METAL	10K 5% 1/10W
R178	1-216-049-00	METAL	1K 5% 1/10W	R280	1-216-061-00	METAL	3.3K 5% 1/10W
R179	1-216-295-11	METAL	0 5% 1/10W	R281	1-216-022-00	METAL	75 5% 1/10W
R180	1-216-049-00	METAL	1K 5% 1/10W	R282	1-216-032-00	METAL	200 5% 1/10W
R181	1-216-070-00	METAL	7.5K 5% 1/10W	R283	1-216-053-00	METAL	1.5K 5% 1/10W
R182	1-216-049-00	METAL	1K 5% 1/10W	R284	1-216-689-11	METAL	39K 5% 1/10W
R183	1-216-295-11	METAL	0 5% 1/10W	R285	1-216-053-00	METAL	1.5K 5% 1/10W
R185	1-216-061-00	METAL	3.3K 5% 1/10W	R288	1-216-043-00	METAL	560 5% 1/10W
R186	1-216-053-00	METAL	1.5K 5% 1/10W	R289	1-216-057-00	METAL	2.2K 5% 1/10W
R187	1-216-033-00	METAL	220 5% 1/10W	R290	1-216-045-00	METAL	680 5% 1/10W
R188	1-216-057-00	METAL	2.2K 5% 1/10W	R291	1-216-045-00	METAL	680 5% 1/10W
R190	1-216-057-00	METAL	2.2K 5% 1/10W	R292	1-216-031-00	METAL	180 5% 1/10W
R191	1-216-057-00	METAL	2.2K 5% 1/10W	R293	1-216-057-00	METAL	2.2K 5% 1/10W
R192	1-216-049-00	METAL	1K 5% 1/10W	R301	1-216-053-00	METAL	1.5K 5% 1/10W
R193	1-216-295-11	METAL	0 5% 1/10W	R302	1-216-053-00	METAL	1.5K 5% 1/10W
R195	1-216-049-00	METAL	1K 5% 1/10W	R303	1-216-053-00	METAL	1.5K 5% 1/10W
R196	1-216-049-00	METAL	1K 5% 1/10W	R304	1-216-033-00	METAL	220 5% 1/10W
R197	1-216-049-00	METAL	1K 5% 1/10W	R305	1-216-033-00	METAL	220 5% 1/10W
R198	1-216-049-00	METAL	1K 5% 1/10W	R306	1-216-057-00	METAL	2.2K 5% 1/10W
R200	1-216-067-00	METAL	5.6K 5% 1/10W	R307	1-216-057-00	METAL	2.2K 5% 1/10W
R202	1-216-295-11	METAL	0 5% 1/10W	R308	1-216-061-00	METAL	3.3K 5% 1/10W
R206	1-216-295-11	METAL	0 5% 1/10W	R309	1-216-065-00	METAL	4.7K 5% 1/10W
R209	1-216-039-00	METAL	390 5% 1/10W	R310	1-216-065-00	METAL	4.7K 5% 1/10W
R210	1-216-041-00	METAL	470 5% 1/10W	R311	1-216-061-00	METAL	3.3K 5% 1/10W
R211	1-216-057-00	METAL	2.2K 5% 1/10W	R313	1-216-033-00	METAL	220 5% 1/10W
R212	1-216-073-00	METAL	10K 5% 1/10W	R314	1-216-033-00	METAL	220 5% 1/10W
R213	1-216-083-00	METAL	27K 5% 1/10W	R315	1-216-089-00	METAL	47K 5% 1/10W

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
R316	1-216-033-00	METAL	220 5% 1/10W	R389	1-216-045-00	METAL	680 5% 1/10W
R317	1-216-033-00	METAL	220 5% 1/10W	R391	1-216-049-00	METAL	1K 5% 1/10W
R318	1-216-033-00	METAL	220 5% 1/10W	R392	1-216-095-00	METAL	82K 5% 1/10W
R319	1-216-073-00	METAL	10K 5% 1/10W	R393	1-216-049-00	METAL	1K 5% 1/10W
R320	1-216-033-00	METAL	220 5% 1/10W	R394	1-216-057-00	METAL	2.2K 5% 1/10W
R321	1-216-033-00	METAL	220 5% 1/10W	R395	1-216-053-00	METAL	1.5K 5% 1/10W
R322	1-216-073-00	METAL	10K 5% 1/10W	R397	1-216-049-00	METAL	1K 5% 1/10W
R323	1-216-073-00	METAL	10K 5% 1/10W	R399	1-216-049-00	METAL	1K 5% 1/10W
R324	1-216-033-00	METAL	220 5% 1/10W	R400	1-216-033-00	METAL	220 5% 1/10W
R325	1-216-073-00	METAL	10K 5% 1/10W	R401	1-216-053-00	METAL	1.5K 5% 1/10W
R326	1-216-057-00	METAL	2.2K 5% 1/10W	R402	1-216-053-00	METAL	1.5K 5% 1/10W
R327	1-216-077-00	METAL	15K 5% 1/10W	R403	1-216-295-11	METAL	0 5% 1/10W
R328	1-216-033-00	METAL	220 5% 1/10W	R405	1-216-015-00	METAL	39 5% 1/10W
R329	1-216-033-00	METAL	220 5% 1/10W	R406	1-216-033-00	METAL	220 5% 1/10W
R330	1-216-057-00	METAL	2.2K 5% 1/10W	R407	1-216-049-00	METAL	1K 5% 1/10W
R331	1-216-033-00	METAL	220 5% 1/10W	R408	1-216-057-00	METAL	2.2K 5% 1/10W
R332	1-216-053-00	METAL	1.5K 5% 1/10W	R409	1-216-053-00	METAL	1.5K 5% 1/10W
R333	1-216-057-00	METAL	2.2K 5% 1/10W	R410	1-216-049-00	METAL	1K 5% 1/10W
R334	1-216-053-00	METAL	1.5K 5% 1/10W	R413	1-216-049-00	METAL	1K 5% 1/10W
R335	1-216-053-00	METAL	1.5K 5% 1/10W	R414	1-216-033-00	METAL	220 5% 1/10W
R336	1-216-033-00	METAL	220 5% 1/10W	R415	1-216-114-00	METAL	510K 5% 1/10W
R337	1-216-073-00	METAL	10K 5% 1/10W	R416	1-216-053-00	METAL	1.5K 5% 1/10W
R338	1-216-033-00	METAL	220 5% 1/10W	R417	1-216-053-00	METAL	1.5K 5% 1/10W
R339	1-216-073-00	METAL	10K 5% 1/10W	R418	1-216-049-00	METAL	1K 5% 1/10W
R340	1-216-057-00	METAL	2.2K 5% 1/10W	R419	1-216-051-00	METAL	1.2K 5% 1/10W
R341	1-216-057-00	METAL	2.2K 5% 1/10W	R420	1-208-789-11	METAL	2K 0.50% 1/10W
R342	1-216-045-00	METAL	680 5% 1/10W	R422	1-216-041-00	METAL	470 5% 1/10W
R343	1-216-061-00	METAL	3.3K 5% 1/10W	R424	1-216-033-00	METAL	220 5% 1/10W
R344	1-216-057-00	METAL	2.2K 5% 1/10W	R425	1-216-061-00	METAL	3.3K 5% 1/10W
R345	1-216-057-00	METAL	2.2K 5% 1/10W	R429	1-216-049-00	METAL	1K 5% 1/10W
R346	1-216-117-00	METAL	680K 5% 1/10W	R430	1-216-057-00	METAL	2.2K 5% 1/10W
R347	1-216-073-00	METAL	10K 5% 1/10W	R432	1-216-057-00	METAL	2.2K 5% 1/10W
R348	1-216-053-00	METAL	1.5K 5% 1/10W	R433	1-216-053-00	METAL	1.5K 5% 1/10W
R349	1-216-065-00	METAL	4.7K 5% 1/10W	R434	1-216-075-00	METAL	12K 5% 1/10W
R350	1-216-065-00	METAL	4.7K 5% 1/10W	R435	1-216-053-00	METAL	1.5K 5% 1/10W
R351	1-216-041-00	METAL	470 5% 1/10W	R436	1-216-295-11	METAL	0 5% 1/10W
R352	1-216-071-00	METAL	8.2K 5% 1/10W	R437	1-216-049-00	METAL	1K 5% 1/10W
R353	1-216-089-00	METAL	47K 5% 1/10W	R439	1-216-069-00	METAL	6.8K 5% 1/10W
R354	1-216-073-00	METAL	10K 5% 1/10W	R441	1-216-049-00	METAL	1K 5% 1/10W
R355	1-216-089-00	METAL	47K 5% 1/10W	R442	1-216-033-00	METAL	220 5% 1/10W
R356	1-216-073-00	METAL	10K 5% 1/10W	R443	1-216-103-00	METAL	180K 5% 1/10W
R357	1-216-057-00	METAL	2.2K 5% 1/10W	R444	1-216-033-00	METAL	220 5% 1/10W
R358	1-216-045-00	METAL	680 5% 1/10W	R445	1-216-025-00	METAL	100 5% 1/10W
R360	1-216-057-00	METAL	2.2K 5% 1/10W	R446	1-216-033-00	METAL	220 5% 1/10W
R361	1-216-295-11	METAL	0 5% 1/10W	R447	1-216-053-00	METAL	1.5K 5% 1/10W
R363	1-216-057-00	METAL	2.2K 5% 1/10W	R448	1-216-053-00	METAL	1.5K 5% 1/10W
R365	1-216-073-00	METAL	10K 5% 1/10W	R449	1-216-053-00	METAL	1.5K 5% 1/10W
R366	1-216-085-00	METAL	33K 5% 1/10W	R450	1-216-049-00	METAL	1K 5% 1/10W
R367	1-216-047-00	METAL	820 5% 1/10W	R451	1-216-049-00	METAL	1K 5% 1/10W
R368	1-216-049-00	METAL	1K 5% 1/10W	R452	1-216-049-00	METAL	1K 5% 1/10W
R369	1-216-049-00	METAL	1K 5% 1/10W	R453	1-216-033-00	METAL	220 5% 1/10W
R370	1-216-041-00	METAL	470 5% 1/10W	R454	1-216-295-11	METAL	0 5% 1/10W
R371	1-216-057-00	METAL	2.2K 5% 1/10W	R455	1-216-081-00	METAL	22K 5% 1/10W
R372	1-216-041-00	METAL	470 5% 1/10W	R456	1-216-081-00	METAL	22K 5% 1/10W
R376	1-216-053-00	METAL	1.5K 5% 1/10W	R457	1-216-081-00	METAL	22K 5% 1/10W
R378	1-216-295-11	METAL	0 5% 1/10W	R458	1-216-061-00	METAL	3.3K 5% 1/10W
R379	1-216-295-11	METAL	0 5% 1/10W	R459	1-216-061-00	METAL	3.3K 5% 1/10W
R380	1-216-033-00	METAL	220 5% 1/10W	R460	1-216-061-00	METAL	3.3K 5% 1/10W
R381	1-216-295-11	METAL	0 5% 1/10W	R461	1-216-065-00	METAL	4.7K 5% 1/10W
R382	1-216-065-00	METAL	4.7K 5% 1/10W	R462	1-216-051-00	METAL	1.2K 5% 1/10W
R383	1-216-073-00	METAL	10K 5% 1/10W	R463	1-216-059-00	METAL	2.7K 5% 1/10W
R384	1-216-061-00	METAL	3.3K 5% 1/10W	R464	1-216-097-00	METAL	100K 5% 1/10W
R385	1-216-065-00	METAL	4.7K 5% 1/10W	R465	1-216-049-00	METAL	1K 5% 1/10W
R386	1-216-033-00	METAL	220 5% 1/10W	R466	1-216-061-00	METAL	3.3K 5% 1/10W
R387	1-216-045-00	METAL	680 5% 1/10W	R467	1-216-049-00	METAL	1K 5% 1/10W

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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
R468	1-216-065-00	METAL	4.7K 5% 1/10W	R544	1-216-049-00	METAL	1K 5% 1/10W
R469	1-216-081-00	METAL	22K 5% 1/10W	R545	1-216-057-00	METAL	2.2K 5% 1/10W
R470	1-216-071-00	METAL	8.2K 5% 1/10W	R546	1-216-049-00	METAL	1K 5% 1/10W
R471	1-216-073-00	METAL	10K 5% 1/10W	R547	1-216-057-00	METAL	2.2K 5% 1/10W
R472	1-216-053-00	METAL	1.5K 5% 1/10W	R548	1-216-049-00	METAL	1K 5% 1/10W
R473	1-216-295-11	METAL	0 5% 1/10W	R549	1-216-049-00	METAL	1K 5% 1/10W
R474	1-216-053-00	METAL	1.5K 5% 1/10W	R550	1-216-049-00	METAL	1K 5% 1/10W
R475	1-216-065-00	METAL	4.7K 5% 1/10W	R551	1-216-057-00	METAL	2.2K 5% 1/10W
R476	1-216-067-00	METAL	5.6K 5% 1/10W	R552	1-216-057-00	METAL	2.2K 5% 1/10W
R478	1-216-053-00	METAL	1.5K 5% 1/10W	R553	1-216-033-00	METAL	220 5% 1/10W
R479	1-216-041-00	METAL	470 5% 1/10W	R554	1-216-059-00	METAL	2.7K 5% 1/10W
R481	1-216-295-11	METAL	0 5% 1/10W	R555	1-216-059-00	METAL	2.7K 5% 1/10W
R482	1-208-775-11	METAL	510 0.50% 1/10W	R556	1-216-033-00	METAL	220 5% 1/10W
R483	1-216-033-00	METAL	220 5% 1/10W	R557	1-216-041-00	METAL	470 5% 1/10W
R487	1-216-051-00	METAL	1.2K 5% 1/10W	R558	1-216-041-00	METAL	470 5% 1/10W
R489	1-216-045-00	METAL	680 5% 1/10W	R559	1-216-022-00	METAL	75 5% 1/10W
R490	1-216-041-00	METAL	470 5% 1/10W	R560	1-216-041-00	METAL	470 5% 1/10W
R491	1-216-053-00	METAL	1.5K 5% 1/10W	R561	1-216-001-00	METAL	10 5% 1/10W
R493	1-216-061-00	METAL	3.3K 5% 1/10W	R563	1-216-001-00	METAL	10 5% 1/10W
R494	1-216-071-00	METAL	8.2K 5% 1/10W	R564	1-216-001-00	METAL	10 5% 1/10W
R495	1-216-073-00	METAL	10K 5% 1/10W	R565	1-216-001-00	METAL	10 5% 1/10W
R496	1-216-073-00	METAL	10K 5% 1/10W	R566	1-216-001-00	METAL	10 5% 1/10W
R497	1-216-073-00	METAL	10K 5% 1/10W	R567	1-216-001-00	METAL	10 5% 1/10W
R498	1-216-073-00	METAL	10K 5% 1/10W	R568	1-216-051-00	METAL	1.2K 5% 1/10W
R499	1-216-077-00	METAL	15K 5% 1/10W	R569	1-216-063-00	METAL	3.9K 5% 1/10W
R501	1-216-057-00	METAL	2.2K 5% 1/10W	R570	1-216-051-00	METAL	1.2K 5% 1/10W
R502	1-216-057-00	METAL	2.2K 5% 1/10W	R571	1-216-061-00	METAL	3.3K 5% 1/10W
R503	1-216-057-00	METAL	2.2K 5% 1/10W	R572	1-216-041-00	METAL	470 5% 1/10W
R504	1-216-295-11	METAL	0 5% 1/10W	R573	1-216-022-00	METAL	75 5% 1/10W
R505	1-216-033-00	METAL	220 5% 1/10W	R575	1-216-041-00	METAL	470 5% 1/10W
R506	1-216-033-00	METAL	220 5% 1/10W	R576	1-216-041-00	METAL	470 5% 1/10W
R507	1-216-033-00	METAL	220 5% 1/10W	R577	1-216-053-00	METAL	1.5K 5% 1/10W
R508	1-216-033-00	METAL	220 5% 1/10W	R578	1-216-081-00	METAL	22K 5% 1/10W
R509	1-216-057-00	METAL	2.2K 5% 1/10W	R579	1-216-081-00	METAL	22K 5% 1/10W
R510	1-216-057-00	METAL	2.2K 5% 1/10W	R581	1-216-055-00	METAL	1.8K 5% 1/10W
R511	1-216-057-00	METAL	2.2K 5% 1/10W	R582	1-216-053-00	METAL	1.5K 5% 1/10W
R512	1-216-033-00	METAL	220 5% 1/10W	R583	1-216-053-00	METAL	1.5K 5% 1/10W
R514	1-216-057-00	METAL	2.2K 5% 1/10W	R584	1-216-061-00	METAL	3.3K 5% 1/10W
R515	1-216-033-00	METAL	220 5% 1/10W	R585	1-216-053-00	METAL	1.5K 5% 1/10W
R516	1-216-033-00	METAL	220 5% 1/10W	R586	1-216-022-00	METAL	75 5% 1/10W
R517	1-216-033-00	METAL	220 5% 1/10W	R587	1-216-073-00	METAL	10K 5% 1/10W
R518	1-216-033-00	METAL	220 5% 1/10W	R590	1-216-037-00	METAL	330 5% 1/10W
R519	1-216-057-00	METAL	2.2K 5% 1/10W	R591	1-216-037-00	METAL	330 5% 1/10W
R520	1-216-033-00	METAL	220 5% 1/10W	R601	1-216-050-00	METAL	1.1K 5% 1/10W
R521	1-216-033-00	METAL	220 5% 1/10W	R602	1-216-063-00	METAL	3.9K 5% 1/10W
R522	1-216-057-00	METAL	2.2K 5% 1/10W	R603	1-216-059-00	METAL	2.7K 5% 1/10W
R523	1-216-057-00	METAL	2.2K 5% 1/10W	R604	1-216-051-00	METAL	1.2K 5% 1/10W
R524	1-216-057-00	METAL	2.2K 5% 1/10W	R605	1-216-046-00	METAL	750 5% 1/10W
R526	1-216-295-11	METAL	0 5% 1/10W	R606	1-216-041-00	METAL	470 5% 1/10W
R527	1-216-053-00	METAL	1.5K 5% 1/10W	R607	1-216-041-00	METAL	470 5% 1/10W
R528	1-216-033-00	METAL	220 5% 1/10W	R632	1-216-295-11	METAL	0 5% 1/10W
R529	1-216-057-00	METAL	2.2K 5% 1/10W	R633	1-216-295-11	METAL	0 5% 1/10W
R530	1-216-049-00	METAL	1K 5% 1/10W	R634	1-216-295-11	METAL	0 5% 1/10W
R531	1-216-057-00	METAL	2.2K 5% 1/10W	R803	1-216-049-00	METAL	1K 5% 1/10W
R532	1-216-049-00	METAL	1K 5% 1/10W	R804	1-216-065-00	METAL	4.7K 5% 1/10W
R534	1-216-033-00	METAL	220 5% 1/10W	R805	1-216-059-00	METAL	2.7K 5% 1/10W
R535	1-216-033-00	METAL	220 5% 1/10W	R806	1-216-057-00	METAL	2.2K 5% 1/10W
R536	1-216-033-00	METAL	220 5% 1/10W	R901	1-216-049-00	METAL	1K 5% 1/10W
R537	1-216-049-00	METAL	1K 5% 1/10W	R902	1-216-049-00	METAL	1K 5% 1/10W
R538	1-216-049-00	METAL	1K 5% 1/10W	R903	1-216-057-00	METAL	2.2K 5% 1/10W
R539	1-216-685-11	METAL	27K 0.50% 1/10W	R905	1-216-057-00	METAL	2.2K 5% 1/10W
R540	1-216-049-00	METAL	1K 5% 1/10W	R906	1-216-033-00	METAL	220 5% 1/10W
R541	1-216-049-00	METAL	1K 5% 1/10W	R907	1-216-057-00	METAL	2.2K 5% 1/10W
R542	1-216-049-00	METAL	1K 5% 1/10W	R908	1-216-057-00	METAL	2.2K 5% 1/10W
R543	1-216-057-00	METAL	2.2K 5% 1/10W	R910	1-216-073-00	METAL	10K 5% 1/10W

VA-76(B) DUS-12 FMY-13/13P

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>	
R911	1-216-073-00	METAL	10K	5%	1/10W	R908	1-216-097-00	METAL	100K	5%	1/10W	
R915	1-216-049-00	METAL	1K	5%	1/10W	R909	1-216-097-00	METAL	100K	5%	1/10W	
R916	1-216-057-00	METAL	2.2K	5%	1/10W	R924	1-216-041-00	METAL	470	5%	1/10W	
R917	1-216-049-00	METAL	1K	5%	1/10W	R925	1-216-041-00	METAL	470	5%	1/10W	
R934	1-216-041-00	METAL	470	5%	1/10W							
R935	1-216-055-00	METAL	1.8K	5%	1/10W							
R936	1-216-055-00	METAL	1.8K	5%	1/10W							
R937	1-216-045-00	METAL	680	5%	1/10W							
R938	1-216-045-00	METAL	680	5%	1/10W							
R939	1-216-041-00	METAL	470	5%	1/10W							
R941	1-216-295-11	METAL	0	5%	1/10W							
R943	1-216-295-11	METAL	0	5%	1/10W							
R945	1-216-295-11	METAL	0	5%	1/10W	BZ901	1-529-069-11	BUZZER, PIEZOELECTRIC				
R950	1-216-041-00	METAL	470	5%	1/10W							
R951	1-216-097-00	METAL	100K	5%	1/10W							
R952	1-216-065-00	METAL	4.7K	5%	1/10W	C102	1-163-227-11	CERAMIC	10PF		50V	
R954	1-216-065-00	METAL	4.7K	5%	1/10W	C103	1-126-204-11	ELECT	47uF	20%	16V	
R960	1-216-059-00	METAL	2.7K	5%	1/10W	C104	1-163-038-00	CERAMIC	0.1uF		25V	
R982	1-216-049-00	METAL	1K	5%	1/10W	C105	1-163-038-00	CERAMIC	0.1uF		25V	
R983	1-216-049-00	METAL	1K	5%	1/10W	C106	1-163-038-00	CERAMIC	0.1uF		25V	
R984	1-216-049-00	METAL	1K	5%	1/10W	C108	1-163-038-00	CERAMIC	0.1uF		25V	
		<VARIABLE RESISTOR>				C110	1-126-217-11	ELECT	15uF	20%	10V	
RV301	1-238-852-11	RES, ADJ, CERMET	470			C111	1-163-038-00	CERAMIC	0.1uF		25V	
RV302	1-238-852-11	RES, ADJ, CERMET	470			C112	1-163-117-00	CERAMIC	100PF	5%	50V	
RV303	1-238-852-11	RES, ADJ, CERMET	470			C113	1-126-217-11	ELECT	15uF	20%	10V	
RV304	1-238-852-11	RES, ADJ, CERMET	470			C114	1-163-038-00	CERAMIC	0.1uF		25V	
		<CRYSTAL>				C115	1-126-217-11	ELECT	15uF	20%	10V	
X101	1-760-193-11	VIBRATOR, CRYSTAL				C116	1-163-038-00	CERAMIC	0.1uF		25V	
X102	1-579-780-21	VIBRATOR, CRYSTAL				C202	1-163-227-11	CERAMIC	10PF		50V	
X301	1-579-661-21	OSCILLATOR, CRYSTAL				C204	1-163-038-00	CERAMIC	0.1uF		25V	
		*****				C205	1-163-038-00	CERAMIC	0.1uF		25V	
		*****				C206	1-163-038-00	CERAMIC	0.1uF		25V	
		*****				C208	1-163-038-00	CERAMIC	0.1uF		25V	
		*****				C210	1-126-217-11	ELECT	15uF	20%	10V	
		*****				C211	1-163-038-00	CERAMIC	0.1uF		25V	
*A-8275-445-A	DUS-12 BOARD, COMPLETE					C212	1-163-117-00	CERAMIC	100PF	5%	50V	
		*****				C213	1-126-217-11	ELECT	15uF	20%	10V	
		<CAPACITOR>				C214	1-163-038-00	CERAMIC	0.1uF		25V	
C901	1-165-319-11	CERAMIC	0.1uF		50V	C215	1-126-217-11	ELECT	15uF	20%	10V	
		<CONNECTOR>				C216	1-163-038-00	CERAMIC	0.1uF		25V	
CN907	1-506-468-11	PIN, CONNECTOR 3P				C302	1-163-227-11	CERAMIC	10PF		50V	
CN908	1-506-468-11	PIN, CONNECTOR 3P				C304	1-163-038-00	CERAMIC	0.1uF		25V	
CN911	1-506-470-11	PIN, CONNECTOR 5P				C305	1-163-038-00	CERAMIC	0.1uF		25V	
CN912	1-506-467-11	PIN, CONNECTOR 2P				C306	1-163-038-00	CERAMIC	0.1uF		25V	
		<IC>				C308	1-163-038-00	CERAMIC	0.1uF		25V	
IC901	8-759-633-10	IC M54544AL				C310	1-126-217-11	ELECT	15uF	20%	10V	
IC902	8-759-988-13	IC UPC393G2				C311	1-163-038-00	CERAMIC	0.1uF		25V	
		<JUMPER>				C312	1-163-117-00	CERAMIC	100PF	5%	50V	
JR900	1-216-296-00	METAL GLAZE	0	5%	1/8W	C313	1-126-217-11	ELECT	15uF	20%	10V	
JR903	1-216-296-00	METAL GLAZE	0	5%	1/8W	C314	1-163-038-00	CERAMIC	0.1uF		25V	
JR904	1-216-296-00	METAL GLAZE	0	5%	1/8W	C315	1-126-217-11	ELECT	15uF	20%	10V	
		<RESISTOR>				C316	1-163-038-00	CERAMIC	0.1uF		25V	
R901	1-216-037-00	METAL	330	5%	1/10W	C401	1-163-038-00	CERAMIC	0.1uF		25V	
R902	1-216-085-00	METAL	33K	5%	1/10W	C402	1-163-038-00	CERAMIC	0.1uF		25V	
R903	1-216-085-00	METAL	33K	5%	1/10W	C403	1-163-038-00	CERAMIC	0.1uF		25V	
R904	1-216-081-00	METAL	22K	5%	1/10W	C404	1-163-038-00	CERAMIC	0.1uF		25V	
R905	1-216-073-00	METAL	10K	5%	1/10W	C406	1-163-038-00	CERAMIC	0.1uF		25V	
R906	1-216-105-00	METAL	220K	5%	1/10W	C407	1-163-038-00	CERAMIC	0.1uF		25V	
R907	1-216-089-91	METAL	47K	5%	1/10W	C408	1-163-038-00	CERAMIC	0.1uF		25V	
		<RESISTOR>				C409	1-163-038-00	CERAMIC	0.1uF		25V	
		<RESISTOR>				C410	1-126-204-11	ELECT	47uF	20%	16V	
		<RESISTOR>				C411	1-126-204-11	ELECT	47uF	20%	16V	
		<RESISTOR>				C412	1-126-204-11	ELECT	47uF	20%	16V	
		<RESISTOR>				C413	1-163-038-00	CERAMIC	0.1uF		25V	
		<RESISTOR>				C414	1-163-038-00	CERAMIC	0.1uF		25V	

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remark</u>	
C415	1-126-204-11	ELECT	47uF	20%	16V	C603	1-163-037-11	CERAMIC	0.022uF 10%	25V
C416	1-163-038-00	CERAMIC	0.1uF		25V	C604	1-128-065-11	ELECT	68uF 20%	10V
C417	1-163-038-00	CERAMIC	0.1uF		25V	C605	1-163-037-11	CERAMIC	0.022uF 10%	25V
C418	1-163-038-00	CERAMIC	0.1uF		25V	C606	1-126-204-11	ELECT	47uF 20%	16V
C420	1-164-004-11	CERAMIC	0.1uF	10%	25V	C607	1-163-037-11	CERAMIC	0.022uF 10%	25V
C421	1-163-132-00	CERAMIC	430PF	5%	50V	C608	1-126-204-11	ELECT	47uF 20%	16V
C422	1-163-113-00	CERAMIC	68PF	5%	50V	C706	1-163-038-91	CERAMIC	0.1uF	25V
C423	1-163-113-00	CERAMIC	68PF	5%	50V	C901	1-163-038-00	CERAMIC	0.1uF	25V
C424	1-163-113-00	CERAMIC	68PF	5%	50V	C902	1-163-038-00	CERAMIC	0.1uF	25V
C425	1-163-113-00	CERAMIC	68PF	5%	50V	C903	1-163-038-00	CERAMIC	0.1uF	25V
C426	1-163-113-00	CERAMIC	68PF	5%	50V	C904	1-163-038-00	CERAMIC	0.1uF	25V
C427	1-163-113-00	CERAMIC	68PF	5%	50V	C905	1-163-038-00	CERAMIC	0.1uF	25V
C428	1-163-113-00	CERAMIC	68PF	5%	50V	C906	1-163-097-00	CERAMIC	15PF 5%	50V
C429	1-163-113-00	CERAMIC	68PF	5%	50V	C907	1-163-097-00	CERAMIC	15PF 5%	50V
C430	1-163-113-00	CERAMIC	68PF	5%	50V	C909	1-128-065-11	ELECT	68uF 20%	10V
C440	1-163-133-00	CERAMIC	47uF	5%	50V	C910	1-163-038-00	CERAMIC	0.1uF	25V
C441	1-163-275-11	CERAMIC	0.001MF	5%	50V	C911	1-163-038-00	CERAMIC	0.1uF	25V
C442	1-163-097-00	CERAMIC	15PF	5%	50V	C912	1-163-038-00	CERAMIC	0.1uF	25V
C443	1-163-275-11	CERAMIC	0.001MF	5%	50V					<CONNECTOR>
C444	1-163-243-11	CERAMIC	47uF	5%	50V					
C445	1-163-275-11	CERAMIC	0.001MF	5%	50V	CN1	1-565-212-11	CONNECTOR, FPC (ZIF)	26P	
C446	1-163-275-11	CERAMIC	0.001MF	5%	50V	CN2	1-565-212-11	CONNECTOR, FPC (ZIF)	26P	
C447	1-163-275-11	CERAMIC	0.001MF	5%	50V	CN4	1-566-532-11	CONNECTOR, FPC (ZIF)	16P	
C449	1-163-097-00	CERAMIC	15PF	5% 50V	(UP-1200AEPM)	CN5	1-566-523-11	CONNECTOR, FPC (ZIF)	7P	
C501	1-164-346-11	CERAMIC	1uF		16V	CN6	1-506-486-11	PIN, CONNECTOR	7P	
C502	1-164-346-11	CERAMIC	1uF		16V	CN7	1-506-486-11	PIN, CONNECTOR	7P	
C503	1-164-346-11	CERAMIC	1uF		16V	CN8	*1-564-031-00	PIN, CONNECTOR	6P	
C504	1-164-346-11	CERAMIC	1uF		16V	CN9	1-506-469-11	PIN, CONNECTOR	4P	
C505	1-164-346-11	CERAMIC	1uF		16V	CN10	1-506-469-11	PIN, CONNECTOR	4P	
C506	1-164-346-11	CERAMIC	1uF		16V					<DIODE>
C507	1-163-038-00	CERAMIC	0.1uF		25V					
C508	1-126-204-11	ELECT	47uF	20%	16V	D101	8-719-820-41	DIODE 1SS302		
C519	1-163-109-00	CERAMIC	47PF	5%	50V	D201	8-719-820-41	DIODE 1SS302		
C520	1-163-109-00	CERAMIC	47PF	5%	50V	D301	8-719-820-41	DIODE 1SS302		
C521	1-163-117-00	CERAMIC	100PF	5%	50V	D901	8-719-400-18	DIODE MA152WK		
C522	1-163-038-00	CERAMIC	0.1uF		25V	D903	8-719-104-34	DIODE 1S2836		
C523	1-163-038-00	CERAMIC	0.1uF		25V					<FERRITE, BEAD>
C526	1-163-037-11	CERAMIC	0.022uF	10%	25V					
C527	1-163-038-00	CERAMIC	0.1uF		25V	FB137	1-412-390-21	INDUCTOR CHIP OUGH		
C528	1-163-038-00	CERAMIC	0.1uF		25V	FB138	1-412-390-21	INDUCTOR CHIP OUGH		
						FB139	1-412-390-21	INDUCTOR CHIP OUGH		
C529	1-126-204-11	ELECT	47uF	20%	16V	FB140	1-412-390-21	INDUCTOR CHIP OUGH		
C530	1-164-346-11	CERAMIC	1uF		16V	FB141	1-412-390-21	INDUCTOR CHIP OUGH		
C531	1-163-109-00	CERAMIC	47PF	5%	50V					
C532	1-163-235-11	CERAMIC	22PF	5%	50V	FB142	1-412-390-21	INDUCTOR CHIP OUGH		
C533	1-163-101-00	CERAMIC	22PF	5%	50V	FB143	1-412-390-21	INDUCTOR CHIP OUGH		
						FB144	1-412-390-21	INDUCTOR CHIP OUGH		
C534	1-126-204-11	ELECT	47uF	20%	16V	FB145	1-412-390-21	INDUCTOR CHIP OUGH		
C535	1-163-038-00	CERAMIC	0.1uF		25V	FB147	1-412-390-21	INDUCTOR CHIP OUGH		
C536	1-163-109-00	CERAMIC	47PF	5%	50V					
C537	1-163-038-00	CERAMIC	0.1uF		25V	FB149	1-412-390-21	INDUCTOR CHIP OUGH		
C538	1-163-038-00	CERAMIC	0.1uF		25V	FB150	1-412-390-21	INDUCTOR CHIP OUGH		
						FB151	1-412-390-21	INDUCTOR CHIP OUGH		
C539	1-163-038-00	CERAMIC	0.1uF		25V	FB152	1-412-390-21	INDUCTOR CHIP OUGH		
C540	1-163-038-00	CERAMIC	0.1uF		25V	FB153	1-412-390-21	INDUCTOR CHIP OUGH		
C541	1-163-038-00	CERAMIC	0.1uF		25V					
C542	1-163-038-00	CERAMIC	0.1uF		25V	FB154	1-412-390-21	INDUCTOR CHIP OUGH		
C543	1-163-038-00	CERAMIC	0.1uF		25V					<IC>
C544	1-163-038-00	CERAMIC	0.1uF		25V					
C545	1-126-204-11	ELECT	47uF	20%	16V	IC101	8-752-337-04	IC CXD1176Q		
C546	1-163-038-00	CERAMIC	0.1uF		25V	IC201	8-752-337-04	IC CXD1176Q		
C547	1-163-038-00	CERAMIC	0.1uF		25V	IC301	8-752-337-04	IC CXD1176Q		
C548	1-163-038-00	CERAMIC	0.1uF		25V	IC401	8-759-093-19	IC CXD8444Q		
						IC402	8-752-338-46	IC CXD1178Q		
C549	1-163-113-00	CERAMIC	68PF	5%	50V	IC403	8-752-093-18	IC UPD23C1001EAGW-355B2		
C550	1-163-038-91	CERAMIC	0.1MF	5%	25V	IC404	8-752-093-17	IC UPD23C1001EAGW-354E2		
C551	1-163-038-91	CERAMIC	0.1MF	5%	25V	IC405	8-759-038-00	IC MC74HC574AF		
C601	1-163-037-11	CERAMIC	0.022uF	10%	25V	IC410	8-759-927-29	IC SN74HCU04ANS-E05		
C602	1-128-065-11	ELECT	68uF	20%	10V	IC411	8-759-033-16	IC MC74F74M		

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<u>Ref. No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
IC501	8-759-352-14	IC HM51L240CS7-EL		R145	1-216-033-00	METAL	220 5% 1/10W
IC502	8-759-352-14	IC HM51L240CS7-EL		R146	1-216-053-00	METAL	1.5K 5% 1/10W
IC503	8-759-352-14	IC HM51L240CS7-EL		R147	1-216-295-11	METAL	0 5% 1/10W
IC504	8-759-093-89	IC HM51L240AS7-EL		R201	1-216-022-00	METAL	75 5% 1/10W
IC505	8-759-093-89	IC HM51L240AS7-EL		R204	1-216-017-00	METAL	47 5% 1/10W
IC506	8-759-093-89	IC HM51L240AS7-EL		R205	1-216-033-00	METAL	220 5% 1/10W
IC507	8-759-114-07	IC UPD65013GF-407-3BA		R206	1-216-033-00	METAL	220 5% 1/10W
IC508	8-759-114-09	IC UPD65006GF-250-3B8		R207	1-216-033-00	METAL	220 5% 1/10W
IC509	8-759-084-15	IC CXD8391Q		R208	1-216-033-00	METAL	220 5% 1/10W
IC510	8-759-339-89	IC HD6475328F-UP12V111 (UP-1200A)		R209	1-216-033-00	METAL	220 5% 1/10W
IC510	8-759-332-55	IC HD6435368SW08F (UP-1200AEPM)		R210	1-216-033-00	METAL	220 5% 1/10W
IC511	8-759-992-78	IC 74F257ASJ		R211	1-216-033-00	METAL	220 5% 1/10W
IC512	8-759-989-03	IC 74F32SJ		R212	1-216-033-00	METAL	220 5% 1/10W
IC513	8-759-989-03	IC 74F32SJ		R229	1-216-033-00	METAL	220 5% 1/10W
IC514	8-759-948-02	IC 74F86SJ		R230	1-216-041-00	METAL	470 5% 1/10W
IC515	8-759-948-01	IC 74F04SJ		R231	1-216-041-00	METAL	470 5% 1/10W
IC516	8-759-989-01	IC 74F08SJ-T5L		R232	1-216-041-00	METAL	470 5% 1/10W
IC901	8-759-325-71	IC MB89098PFV-G-114-BND		R233	1-216-041-00	METAL	470 5% 1/10W
IC902	8-759-937-56	IC S-8054ALB-LM-S		R234	1-216-041-00	METAL	470 5% 1/10W
<INDUCTOR>							
L600	1-424-090-11	COIL, LINE FILTER		R237	1-216-041-00	METAL	470 5% 1/10W
L601	1-424-090-11	COIL, LINE FILTER		R240	1-216-009-00	METAL	22 5% 1/10W
L602	1-424-090-11	COIL, LINE FILTER		R241	1-216-025-00	METAL	100 5% 1/10W
L900	1-424-090-11	COIL, LINE FILTER		R242	1-216-073-00	METAL	10K 5% 1/10W
L901	1-424-090-11	COIL, LINE FILTER		R243	1-216-073-00	METAL	10K 5% 1/10W
<TRANSISTOR>							
Q101	8-729-010-75	TRANSISTOR MSC4116-BC		R244	1-216-053-00	METAL	1.5K 5% 1/10W
Q102	8-729-402-84	TRANSISTOR XN4601		R245	1-216-033-00	METAL	220 5% 1/10W
Q201	8-729-010-75	TRANSISTOR MSC4116-BC		R246	1-216-053-00	METAL	1.5K 5% 1/10W
Q202	8-729-402-84	TRANSISTOR XN4601		R247	1-216-295-11	METAL	0 5% 1/10W
Q301	8-729-010-75	TRANSISTOR MSC4116-BC		R301	1-216-022-00	METAL	75 5% 1/10W
Q302	8-729-402-84	TRANSISTOR XN4601		R304	1-216-017-00	METAL	47 5% 1/10W
Q401	8-729-901-01	TRANSISTOR DTC144EK		R305	1-216-033-00	METAL	220 5% 1/10W
Q440	8-729-230-63	TRANSISTOR 2SC4116YG		R306	1-216-033-00	METAL	220 5% 1/10W
Q441	8-729-230-63	TRANSISTOR 2SC4116YG		R307	1-216-033-00	METAL	220 5% 1/10W
Q442	8-729-230-63	TRANSISTOR 2SC4116YG		R308	1-216-033-00	METAL	220 5% 1/10W
Q902	8-729-901-01	TRANSISTOR DTC144EK		R309	1-216-033-00	METAL	220 5% 1/10W
Q903	8-729-901-01	TRANSISTOR DTC144EK		R310	1-216-033-00	METAL	220 5% 1/10W
<RESISTOR>							
R101	1-216-022-00	METAL	75 5% 1/10W	R311	1-216-041-00	METAL	470 5% 1/10W
R104	1-216-017-00	METAL	47 5% 1/10W	R312	1-216-041-00	METAL	470 5% 1/10W
R105	1-216-033-00	METAL	220 5% 1/10W	R313	1-216-041-00	METAL	470 5% 1/10W
R106	1-216-033-00	METAL	220 5% 1/10W	R314	1-216-041-00	METAL	470 5% 1/10W
R107	1-216-033-00	METAL	220 5% 1/10W	R330	1-216-041-00	METAL	470 5% 1/10W
R108	1-216-033-00	METAL	220 5% 1/10W	R331	1-216-041-00	METAL	470 5% 1/10W
R109	1-216-033-00	METAL	220 5% 1/10W	R332	1-216-041-00	METAL	470 5% 1/10W
R110	1-216-033-00	METAL	220 5% 1/10W	R333	1-216-041-00	METAL	470 5% 1/10W
R111	1-216-033-00	METAL	220 5% 1/10W	R334	1-216-041-00	METAL	470 5% 1/10W
R112	1-216-033-00	METAL	220 5% 1/10W	R335	1-216-041-00	METAL	470 5% 1/10W
R113	1-216-033-00	METAL	220 5% 1/10W	R336	1-216-041-00	METAL	470 5% 1/10W
R114	1-216-033-00	METAL	220 5% 1/10W	R337	1-216-041-00	METAL	470 5% 1/10W
R129	1-216-033-00	METAL	220 5% 1/10W	R340	1-216-009-00	METAL	22 5% 1/10W
R130	1-216-041-00	METAL	470 5% 1/10W	R341	1-216-025-00	METAL	100 5% 1/10W
R131	1-216-041-00	METAL	470 5% 1/10W	R342	1-216-073-00	METAL	10K 5% 1/10W
R132	1-216-041-00	METAL	470 5% 1/10W	R343	1-216-073-00	METAL	10K 5% 1/10W
R133	1-216-041-00	METAL	470 5% 1/10W	R344	1-216-053-00	METAL	1.5K 5% 1/10W
R134	1-216-041-00	METAL	470 5% 1/10W	R345	1-216-033-00	METAL	220 5% 1/10W
R135	1-216-041-00	METAL	470 5% 1/10W	R346	1-216-053-00	METAL	1.5K 5% 1/10W
R136	1-216-041-00	METAL	470 5% 1/10W	R347	1-216-295-11	METAL	0 5% 1/10W
R137	1-216-041-00	METAL	470 5% 1/10W	R401	1-216-295-11	METAL	0 5% 1/10W
R140	1-216-009-00	METAL	22 5% 1/10W	R402	1-216-017-00	METAL	47 5% 1/10W
R141	1-216-025-00	METAL	100 5% 1/10W	R403	1-216-032-00	METAL	200 5% 1/10W
R142	1-216-073-00	METAL	10K 5% 1/10W	R404	1-216-032-00	METAL	200 5% 1/10W
R143	1-216-073-00	METAL	10K 5% 1/10W	R405	1-216-032-00	METAL	200 5% 1/10W
R144	1-216-053-00	METAL	1.5K 5% 1/10W	R406	1-216-061-00	METAL	3.3K 5% 1/10W
				R422	1-216-065-00	METAL	4.7K 5% 1/10W
				R423	1-216-295-11	METAL	0 5% 1/10W
				R424	1-216-295-11	METAL	0 5% 1/10W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R426	1-216-295-11	METAL	0 5% 1/10W	R575	1-216-017-00	METAL	47 5% 1/10W
R427	1-216-069-00	METAL	6.8K 5% 1/10W	R576	1-216-049-00	METAL	1K 5% 1/10W
R428	1-216-069-00	METAL	6.8K 5% 1/10W	R578	1-216-295-11	METAL	0 5% 1/10W
R429	1-216-049-00	METAL	1K 5% 1/10W	R579	1-216-295-11	METAL	0 5% 1/10W
R430	1-216-295-11	METAL	0 5% 1/10W	R580	1-216-073-00	METAL	10K 5% 1/10W
R440	1-216-295-11	METAL	0 5% 1/10W	R582	1-216-295-11	METAL	0 5% 1/10W
R441	1-216-295-11	METAL	0 5% 1/10W	R583	1-216-033-00	METAL	220 5% 1/10W
R442	1-216-073-00	METAL	10K 5% 1/10W	R584	1-216-033-00	METAL	220 5% 1/10W
R443	1-216-061-00	METAL	3.3K 5% 1/10W	R585	1-216-033-00	METAL	220 5% 1/10W
R444	1-216-037-00	METAL	330 5% 1/10W	R586	1-216-033-00	METAL	220 5% 1/10W
R445	1-216-025-91	METAL	100 5% 1/10W	R587	1-216-033-00	METAL	220 5% 1/10W
R446	1-216-077-00	METAL	15K 5% 1/10W	R588	1-216-033-00	METAL	220 5% 1/10W
R447	1-216-073-00	METAL	10K 5% 1/10W	R589	1-216-033-00	METAL	220 5% 1/10W
R448	1-216-033-00	METAL	220 5% 1/10W	R590	1-216-033-00	METAL	220 5% 1/10W
R449	1-216-037-00	METAL	330 5% 1/10W	R591	1-216-033-00	METAL	220 5% 1/10W
R450	1-216-033-00	METAL	220 5% 1/10W	R592	1-216-033-00	METAL	220 5% 1/10W
R451	1-216-077-00	METAL	15K 5% 1/10W	R593	1-216-033-00	METAL	220 5% 1/10W
R452	1-216-073-00	METAL	10K 5% 1/10W	R594	1-216-033-00	METAL	220 5% 1/10W
R453	1-216-033-00	METAL	220 5% 1/10W	R595	1-216-033-00	METAL	220 5% 1/10W
R454	1-216-037-00	METAL	330 5% 1/10W	R596	1-216-033-00	METAL	220 5% 1/10W
R455	1-216-033-00	METAL	220 5% 1/10W	R597	1-216-033-00	METAL	220 5% 1/10W
R456	1-216-121-00	METAL	1M 5% 1/10W	R598	1-216-033-00	METAL	220 5% 1/10W
R457	1-216-121-00	METAL	1M 5% 1/10W	R599	1-216-033-00	METAL	220 5% 1/10W
R458	1-216-121-00	METAL	1M 5% 1/10W	R600	1-216-033-00	METAL	220 5% 1/10W
R459	1-216-295-11	METAL	0 5% 1/10W	R601	1-216-049-00	METAL	1K 5% 1/10W
R471	1-216-295-11	METAL	0 5% 1/10W	R602	1-216-033-00	METAL	220 5% 1/10W
R474	1-216-295-11	METAL	0 5% 1/10W	R603	1-216-033-00	METAL	220 5% 1/10W
R476	1-216-295-11	METAL	0 5% 1/10W	R604	1-216-033-00	METAL	220 5% 1/10W
R478	1-216-121-00	METAL	1M 5% 1/10W	R605	1-216-033-00	METAL	220 5% 1/10W
R501	1-216-017-00	METAL	47 5% 1/10W	R606	1-216-033-00	METAL	220 5% 1/10W
R502	1-216-017-00	METAL	47 5% 1/10W	R607	1-216-033-00	METAL	220 5% 1/10W
R503	1-216-017-00	METAL	47 5% 1/10W	R608	1-216-033-00	METAL	220 5% 1/10W
R504	1-216-017-00	METAL	47 5% 1/10W	R609	1-216-033-00	METAL	220 5% 1/10W
R505	1-216-017-00	METAL	47 5% 1/10W	R610	1-216-033-00	METAL	220 5% 1/10W
R506	1-216-017-00	METAL	47 5% 1/10W	R611	1-216-033-00	METAL	220 5% 1/10W
R507	1-216-017-00	METAL	47 5% 1/10W	R612	1-216-033-00	METAL	220 5% 1/10W
R508	1-216-017-00	METAL	47 5% 1/10W	R613	1-216-033-00	METAL	220 5% 1/10W
R509	1-216-017-00	METAL	47 5% 1/10W	R614	1-216-033-00	METAL	220 5% 1/10W
R510	1-216-017-00	METAL	47 5% 1/10W	R615	1-216-033-00	METAL	220 5% 1/10W
R511	1-216-049-00	METAL	1K 5% 1/10W	R616	1-216-033-00	METAL	220 5% 1/10W
R512	1-216-049-00	METAL	1K 5% 1/10W	R617	1-216-033-00	METAL	220 5% 1/10W
R513	1-216-017-00	METAL	47 5% 1/10W	R618	1-216-033-00	METAL	220 5% 1/10W
R514	1-216-017-00	METAL	47 5% 1/10W	R619	1-216-033-00	METAL	220 5% 1/10W
R515	1-216-017-00	METAL	47 5% 1/10W	R620	1-216-295-11	METAL	0 5% 1/10W
R517	1-216-017-00	METAL	47 5% 1/10W	R621	1-216-295-11	METAL	0 5% 1/10W
R518	1-216-017-00	METAL	47 5% 1/10W	R622	1-216-295-11	METAL	0 5% 1/10W
R519	1-216-025-00	METAL	100 5% 1/10W	R623	1-216-295-11	METAL	0 5% 1/10W
R525	1-216-017-00	METAL	47 5% 1/10W	R624	1-216-295-11	METAL	0 5% 1/10W
R526	1-216-017-00	METAL	47 5% 1/10W	R625	1-216-295-11	METAL	0 5% 1/10W
R527	1-216-049-00	METAL	1K 5% 1/10W	R626	1-216-295-11	METAL	0 5% 1/10W
R530	1-216-041-00	METAL	470 5% 1/10W	R627	1-216-295-11	METAL	0 5% 1/10W
R531	1-216-017-00	METAL	47 5% 1/10W	R628	1-216-295-11	METAL	0 5% 1/10W
R532	1-216-017-00	METAL	47 5% 1/10W	R642	1-216-295-11	METAL	0 5% 1/10W
R533	1-216-017-00	METAL	47 5% 1/10W	R643	1-216-065-00	METAL	4.7K 5% 1/10W
R541	1-216-017-00	METAL	47 5% 1/10W	R645	1-216-295-11	METAL	0 5% 1/10W(UP-1200A)
R542	1-216-065-00	METAL	4.7K 5% 1/10W	R647	1-216-295-11	METAL	0 5% 1/10W(UP-1200AEPM)
R551	1-216-295-11	METAL	0 5% 1/10W	R650	1-216-033-00	METAL	220 5% 1/10W
R556	1-216-295-11	METAL	0 5% 1/10W	R651	1-216-295-11	METAL	0 5% 1/10W
R564	1-216-033-00	METAL	220 5% 1/10W	R652	1-216-033-00	METAL	220 5% 1/10W
R565	1-216-033-00	METAL	220 5% 1/10W	R655	1-216-295-11	METAL	0 5% 1/10W
R566	1-216-089-00	METAL	47K 5% 1/10W	R816	1-216-295-11	METAL	0 5% 1/10W
R568	1-216-295-11	METAL	0 5% 1/10W	R817	1-216-295-11	METAL	0 5% 1/10W
R572	1-216-089-91	METAL	47K 5% 1/10W	R818	1-216-295-11	METAL	0 5% 1/10W
R573	1-216-017-00	METAL	47 5% 1/10W	R819	1-216-073-00	METAL	10K 5% 1/10W
R574	1-216-017-00	METAL	47 5% 1/10W	R820	1-216-073-00	METAL	10K 5% 1/10W

FMY-13/13P | **HM-22(L)/22P(L)**

Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
R821	1-216-073-00	METAL	10K 5% 1/10W	C727	1-162-970-11	CERAMIC	0.01uF 10%
R822	1-216-073-00	METAL	10K 5% 1/10W	C728	1-162-970-11	CERAMIC	0.01uF 10%
R823	1-216-295-11	METAL	0 5% 1/10W	C729	1-162-970-11	CERAMIC	0.01uF 10%
R824	1-216-295-11	METAL	0 5% 1/10W	C734	1-164-360-11	CERAMIC	0.1uF 16V
R901	1-216-089-91	METAL	47K 5% 1/10W	C735	1-165-112-11	CERAMIC	0.33uF 16V
R908	1-216-089-91	METAL	47K 5% 1/10W	C736	1-162-970-11	CERAMIC	0.01uF 10%
R910	1-216-089-91	METAL	47K 5% 1/10W	C737	1-126-204-11	ELECT	47uF 20%
R911	1-216-089-91	METAL	47K 5% 1/10W	C738	1-165-112-11	CERAMIC	0.33uF 16V
R912	1-216-089-91	METAL	47K 5% 1/10W	C739	1-135-166-21	TANTAL	47uF 20% 6.3V
R915	1-216-089-91	METAL	47K 5% 1/10W	C740	1-165-112-11	CERAMIC	0.33uF 16V
R916	1-216-089-91	METAL	47K 5% 1/10W	C741	1-165-112-11	CERAMIC	0.33uF 16V
R917	1-216-025-00	METAL	100 5% 1/10W	C742	1-126-204-11	ELECT	47uF 20% 16V
R918	1-216-089-91	METAL	47K 5% 1/10W	C744	1-165-112-11	CERAMIC	0.33uF 16V
R919	1-216-089-91	METAL	47K 5% 1/10W	C746	1-165-112-11	CERAMIC	0.33uF 16V
R920	1-216-025-00	METAL	100 5% 1/10W	C747	1-164-360-11	CERAMIC	0.1uF 16V
R921	1-216-025-00	METAL	100 5% 1/10W	C749	1-165-112-11	CERAMIC	0.33uF 16V
R922	1-216-089-91	METAL	47K 5% 1/10W	C750	1-165-112-11	CERAMIC	0.33uF 16V
R923	1-216-025-00	METAL	100 5% 1/10W	C751	1-162-970-11	CERAMIC	0.01uF 10%
R924	1-216-089-00	METAL	47K 5% 1/10W	C752	1-162-970-11	CERAMIC	0.01uF 10%
R926	1-216-295-11	METAL	0 5% 1/10W	C753	1-126-204-11	ELECT	47uF 20% 16V
R927	1-216-295-11	METAL	0 5% 1/10W	C754	1-162-945-11	CERAMIC	22PF 5% 50V
R928	1-216-109-00	METAL	330K 5% 1/10W	C755	1-162-945-11	CERAMIC	22PF 5% 50V
R929	1-216-025-00	METAL	100 5% 1/10W	C756	1-165-112-11	CERAMIC	0.33uF 16V
R931	1-216-025-00	METAL	100 5% 1/10W	C757	1-162-970-11	CERAMIC	0.01uF 10% 25V
R932	1-216-065-00	METAL	4.7K 5% 1/10W	C758	1-162-970-11	CERAMIC	0.01uF 10% 25V
R936	1-216-097-00	METAL	100K 5% 1/10W	C759	1-162-970-11	CERAMIC	0.01uF 10% 25V
R937	1-216-049-00	METAL	1K 5% 1/10W	C760	1-162-970-11	CERAMIC	0.01uF 10% 25V
R939	1-216-065-00	METAL	4.7K 5% 1/10W	C761	1-162-970-11	CERAMIC	0.01uF 10% 25V
R942	1-216-065-00	METAL	4.7K 5% 1/10W	C762	1-162-970-11	CERAMIC	0.01uF 10% 25V
R945	1-216-041-00	METAL	470 5% 1/10W	C763	1-162-970-11	CERAMIC	0.01uF 10% 25V
			<CRYSTAL>	C764	1-162-970-11	CERAMIC	0.01uF 10% 25V
X501	1-579-868-11	VIBRATOR, CRYSTAL		C765	1-162-970-11	CERAMIC	0.01uF 10% 25V
X901	1-579-550-11	VIBRATOR, CRYSTAL		C766	1-162-970-11	CERAMIC	0.01uF 10% 25V
XTL901	1-579-369-21	VIBRATOR		C767	1-162-970-11	CERAMIC	0.01uF 10% 25V
				C768	1-164-357-11	CERAMIC	1000PF 5% 50V
				C769	1-164-357-11	CERAMIC	1000PF 5% 50V
				C770	1-164-360-11	CERAMIC	0.1uF 16V
*A-8274-824-A	HM-22(L) BOARD, COMPLETE (UP-1200A)			C771	1-164-360-11	CERAMIC	0.1uF 16V
*A-8274-819-A	HM-22P(L) BOARD, COMPLETE (UP-1200AEPM)			C776	1-165-112-11	CERAMIC	0.33uF 16V
				C777	1-165-112-11	CERAMIC	0.33uF 16V
			<CAPACITOR>	C778	1-165-112-11	CERAMIC	0.33uF 16V
				C779	1-162-939-11	CERAMIC	8PF 50V
C701	1-126-950-11	ELECT	330uF 20% 35V	C780	1-162-939-11	CERAMIC	8PF 50V
C703	1-165-112-11	CERAMIC	0.33uF 16V	C781	1-162-951-11	CERAMIC	68PF 50V
C704	1-165-112-11	CERAMIC	0.33uF 16V	C782	1-162-951-11	CERAMIC	68PF 50V
C705	1-124-779-00	ELECT	10uF 20% 16V	C783	1-162-951-11	CERAMIC	68PF 50V
C706	1-165-112-11	CERAMIC	0.33uF 16V	C784	1-162-951-11	CERAMIC	68PF 50V
C707	1-165-112-11	CERAMIC	0.33uF 16V	C785	1-162-951-11	CERAMIC	68PF 50V
C708	1-135-166-21	TANTAL	47uF 20% 6.3V				
C711	1-165-112-11	CERAMIC	0.33uF 16V				
C712	1-165-112-11	CERAMIC	0.33uF 16V				
C713	1-162-970-11	CERAMIC	0.01uF 10% 25V				
C714	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN701	*1-580-055-21	PIN, CONNECTOR 2P	
C715	1-165-112-11	CERAMIC	0.33uF 16V	CN702	*1-580-056-21	PIN, CONNECTOR 3P	
C716	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN703	*1-580-056-21	PIN, CONNECTOR 3P	
C717	1-164-360-11	CERAMIC	0.1uF 16V	CN704	*1-580-056-21	PIN, CONNECTOR 3P	
C718	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN705	1-566-537-11	CONNECTOR, FPC (NON ZIF) 5P	
C719	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN706	1-566-523-11	CONNECTOR, FPC (ZIF) 7P	
C720	1-164-360-11	CERAMIC	0.1uF 16V	CN707	1-506-481-11	PIN, CONNECTOR 2P	
C721	1-164-360-11	CERAMIC	0.1uF 16V	CN708	1-506-481-11	PIN, CONNECTOR 2P	
C722	1-164-360-11	CERAMIC	0.1uF 16V	CN709	1-506-485-11	PIN, CONNECTOR 6P	
C723	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN710	1-569-775-21	PIN, CONNECTOR 5P	
C724	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN711	1-569-775-21	PIN, CONNECTOR 5P	
C725	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN712	1-506-481-11	PIN, CONNECTOR 2P	
C726	1-162-970-11	CERAMIC	0.01uF 10% 25V	CN713	1-569-775-21	PIN, CONNECTOR 5P	
				CN714	1-566-532-11	CONNECTOR, FPC (ZIF) 16P	

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

HM-22(L)/22P(L)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
CN715	1-566-526-11	CONNECTOR, FPC (ZIF) 10P		R701	1-216-829-11	METAL	4.7K 5% 1/16W
CN716	1-506-494-11	PIN, CONNECTOR 15P		R702	1-216-829-11	METAL	4.7K 5% 1/16W
CN717	1-566-528-21	CONNECTOR, FPC (ZIF) 12P		R703	1-216-829-11	METAL	4.7K 5% 1/16W
CN718	*1-580-056-21	PIN, CONNECTOR 3P		R704	1-216-829-11	METAL	4.7K 5% 1/16W
CN719	1-506-481-11	PIN, CONNECTOR 2P		R705	1-216-818-11	METAL	560 5% 1/16W
CN722	*1-580-055-21	PIN, CONNECTOR 2P		R706	1-216-818-11	METAL	560 5% 1/16W
CN723	*1-580-056-21	PIN, CONNECTOR 3P		R707	1-216-818-11	METAL	560 5% 1/16W
CN724	1-580-265-11	CONNECTOR, BOARD TO BOARD 16P		R708	1-216-818-11	METAL	560 5% 1/16W
CN725	1-506-481-11	PIN, CONNECTOR 2P		R709	1-216-813-11	METAL	220 5% 1/16W
		<DIODE>		R710	1-216-813-11	METAL	220 5% 1/16W
D701	8-719-200-02	DIODE 10E2		R711	1-216-813-11	METAL	220 5% 1/16W
D702	8-719-200-02	DIODE 10E2		R712	1-216-813-11	METAL	220 5% 1/16W
D703	8-719-104-34	DIODE 1S2835		R713	Δ 1-215-930-11	METAL	10 5% 5W
D704	8-719-104-34	DIODE 1S2835		R715	Δ 1-215-930-11	METAL	10 5% 5W
D705	8-719-104-34	DIODE 1S2835		R716	1-216-841-11	METAL	47K 5% 1/16W
D706	8-719-104-34	DIODE 1S2835		R717	1-216-819-11	METAL	680 5% 1/16W
D707	8-719-104-34	DIODE 1S2835		R718	1-216-809-11	METAL	100 5% 1/16W
D709	8-719-104-34	DIODE 1S2835		R719	1-260-099-11	CARBON	1K 5% 1/2W
D711	8-719-104-34	DIODE 1S2835		R720	1-216-833-11	METAL	10K 5% 1/16W
		<FUSE>		R721	1-216-825-11	METAL	2.2K 5% 1/16W
F001	1-532-777-21	FUSE, MICRO (SECONDARY)		R722	1-216-815-11	METAL	330 5% 1/16W
		<FILTER>		R723	1-216-831-11	METAL	6.8K 5% 1/16W
FL1	1-239-492-11	FILTER, EMI		R724	1-216-825-11	METAL	2.2K 5% 1/16W
		<IC>		R725	1-216-840-11	METAL	39K 5% 1/16W
IC701	8-759-154-84	IC HDC443V2		R726	1-216-818-11	METAL	560 5% 1/16W
IC702	8-759-053-58	IC IDT6116SA25S0		R727	1-216-813-11	METAL	220 5% 1/16W
IC703	8-759-053-58	IC IDT6116SA25S0		R728	1-216-839-11	METAL	33K 5% 1/16W
IC704	8-759-344-54	IC IDT6116SA25S0		R729	1-216-841-11	METAL	47K 5% 1/16W
IC706	8-759-998-98	IC LM358D		R730	1-216-835-11	METAL	15K 5% 1/16W
IC707	8-759-085-67	IC LM339NS		R731	1-216-849-11	METAL	220K 5% 1/16W
IC708	8-752-863-53	IC CXP80P116Q		R732	1-216-833-11	METAL	10K 5% 1/16W
IC709	8-759-157-19	IC MB3863PF-G-BND		R733	1-216-839-11	METAL	33K 5% 1/16W
IC710	8-759-925-74	IC SN74HC04ANS		R734	1-216-840-11	METAL	39K 5% 1/16W
IC711	8-759-085-67	IC LM339NS		R735	1-216-831-11	METAL	6.8K 5% 1/16W
IC712	8-759-085-67	IC LM339NS		R736	1-216-841-11	METAL	47K 5% 1/16W
IC713	8-759-927-46	IC SN74HC00ANS		R737	1-216-841-11	METAL	47K 5% 1/16W
IC714	8-759-242-70	IC TC7WU04F		R738	1-216-841-11	METAL	47K 5% 1/16W
		<INDUCTOR>		R739	1-216-841-11	METAL	47K 5% 1/16W
L701	1-424-090-11	COIL, LINE FILTER		R740	1-216-837-11	METAL	22K 5% 1/16W
L702	1-424-090-11	COIL, LINE FILTER		R741	1-216-841-11	METAL	47K 5% 1/16W
L703	1-424-090-11	COIL, LINE FILTER		R742	1-216-864-11	METAL	0 5% 1/16W
L704	1-412-390-21	INDUCTOR CHIP OUE		R744	1-216-837-11	METAL	22K 5% 1/16W
L705	1-412-390-21	INDUCTOR CHIP OUE		R746	1-216-841-11	METAL	47K 5% 1/16W
L706	1-412-390-21	INDUCTOR CHIP OUE		R747	1-216-849-11	METAL	220K 5% 1/16W
L707	1-412-390-21	INDUCTOR CHIP OUE		R748	1-216-833-11	METAL	10K 5% 1/16W
		<TRANSISTOR>		R750	1-216-841-11	METAL	47K 5% 1/16W
Q701	8-729-901-04	TRANSISTOR DTA114EK		R751	1-216-833-11	METAL	10K 5% 1/16W
Q702	8-729-901-00	TRANSISTOR DTC124EK		R752	1-216-833-11	METAL	10K 5% 1/16W
Q703	8-729-114-48	TRANSISTOR 2SB962-Z-P		R753	1-216-813-11	METAL	220 5% 1/16W
Q705	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R754	1-216-837-11	METAL	22K 5% 1/16W
Q706	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R755	1-216-841-11	METAL	47K 5% 1/16W
Q707	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R756	1-216-849-11	METAL	220K 5% 1/16W
Q708	8-729-017-80	TRANSISTOR 2SD992-Z-E2		R757	1-216-833-11	METAL	10K 5% 1/16W
Q709	8-729-140-75	TRANSISTOR 2SD999-CLK		R758	1-216-821-11	METAL	1K 5% 1/16W
Q710	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R760	1-216-813-11	METAL	220 5% 1/16W
Q711	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R761	1-216-837-11	METAL	22K 5% 1/16W
		<TRANSISTOR>		R762	1-216-841-11	METAL	47K 5% 1/16W
				R763	1-216-821-11	METAL	1K 5% 1/16W
				R764	1-216-849-11	METAL	220K 5% 1/16W
				R765	1-216-833-11	METAL	10K 5% 1/16W
				R766	1-216-839-11	METAL	33K 5% 1/16W
				R767	1-216-821-11	METAL	1K 5% 1/16W
				R768	1-216-821-11	METAL	1K 5% 1/16W

HM-22(L)/22P(L)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R769	1-216-841-11	METAL	47K 5% 1/16W	R834	1-216-841-11	METAL	47K 5% 1/16W
R770	1-216-841-11	METAL	47K 5% 1/16W	R835	1-216-841-11	METAL	47K 5% 1/16W
R771	1-216-841-11	METAL	47K 5% 1/16W	R837	1-216-813-11	METAL	220 5% 1/16W
R772	1-216-841-11	METAL	47K 5% 1/16W	R838	1-216-841-11	METAL	47K 5% 1/16W
R773	1-216-841-11	METAL	47K 5% 1/16W	R839	1-216-841-11	METAL	47K 5% 1/16W
R774	1-216-841-11	METAL	47K 5% 1/16W	R840	1-216-821-11	METAL	1K 5% 1/16W
R775	1-216-841-11	METAL	47K 5% 1/16W	R841	1-216-849-11	METAL	220K 5% 1/16W
R776	1-216-841-11	METAL	47K 5% 1/16W	R842	1-216-833-11	METAL	10K 5% 1/16W
R777	1-216-841-11	METAL	47K 5% 1/16W	R843	1-216-839-11	METAL	33K 5% 1/16W
R778	1-216-841-11	METAL	47K 5% 1/16W	R844	1-216-837-11	METAL	22K 5% 1/16W
R779	1-216-813-11	METAL	220 5% 1/16W	R846	1-216-813-11	METAL	220 5% 1/16W
R780	1-216-813-11	METAL	220 5% 1/16W	R847	1-216-841-11	METAL	47K 5% 1/16W
R781	1-216-813-11	METAL	220 5% 1/16W	R848	1-216-841-11	METAL	47K 5% 1/16W
R782	1-216-813-11	METAL	220 5% 1/16W	R849	1-216-821-11	METAL	1K 5% 1/16W
R783	1-216-813-11	METAL	220 5% 1/16W	R850	1-216-849-11	METAL	220K 5% 1/16W
R784	1-216-813-11	METAL	220 5% 1/16W	R851	1-216-833-11	METAL	10K 5% 1/16W
R785	1-216-813-11	METAL	220 5% 1/16W	R852	1-216-839-11	METAL	33K 5% 1/16W
R786	1-216-813-11	METAL	220 5% 1/16W	R853	1-216-837-11	METAL	22K 5% 1/16W
R787	1-216-813-11	METAL	220 5% 1/16W	R854	1-216-821-11	METAL	1K 5% 1/16W
R788	1-216-813-11	METAL	220 5% 1/16W	R855	1-216-841-11	METAL	47K 5% 1/16W
R789	1-216-837-11	METAL	22K 5% 1/16W	R856	1-216-839-11	METAL	33K 5% 1/16W
R790	1-216-839-11	METAL	33K 5% 1/16W	R857	1-216-815-11	METAL	330 5% 1/16W
R791	1-216-813-11	METAL	220 5% 1/16W	R858	1-216-841-11	METAL	47K 5% 1/16W
R792	1-216-813-11	METAL	220 5% 1/16W	R859	1-216-821-11	METAL	1K 5% 1/16W
R793	1-216-838-11	METAL	27K 5% 1/16W	R860	1-216-849-11	METAL	220K 5% 1/16W
R794	1-216-838-11	METAL	27K 5% 1/16W	R861	1-216-833-11	METAL	10K 5% 1/16W
R795	1-216-821-11	METAL	1K 5% 1/16W	R862	1-216-839-11	METAL	33K 5% 1/16W
R796	1-216-821-11	METAL	1K 5% 1/16W	R863	1-216-837-11	METAL	22K 5% 1/16W
R797	1-216-837-11	METAL	22K 5% 1/16W	R866	1-216-821-11	METAL	1K 5% 1/16W
R798	1-216-839-11	METAL	33K 5% 1/16W	R867	1-216-821-11	METAL	1K 5% 1/16W
R799	1-216-813-11	METAL	220 5% 1/16W	R868	1-216-829-11	METAL	4.7K 5% 1/16W
R800	1-216-813-11	METAL	220 5% 1/16W	R869	1-216-821-11	METAL	1K 5% 1/16W
R801	1-216-838-11	METAL	27K 5% 1/16W	R870	1-216-821-11	METAL	1K 5% 1/16W
R802	1-216-838-11	METAL	27K 5% 1/16W	R871	1-216-821-11	METAL	1K 5% 1/16W
R803	1-216-821-11	METAL	1K 5% 1/16W	R872	1-216-821-11	METAL	1K 5% 1/16W
R804	1-216-821-11	METAL	1K 5% 1/16W	R873	1-216-841-11	METAL	47K 5% 1/16W
R805	1-216-849-11	METAL	220K 5% 1/16W	R874	1-216-841-11	METAL	47K 5% 1/16W
R806	1-216-849-11	METAL	220K 5% 1/16W	R879	1-216-809-11	METAL	100 5% 1/16W
R807	1-216-849-11	METAL	220K 5% 1/16W	R880	1-216-841-11	METAL	47K 5% 1/16W
R808	1-216-849-11	METAL	220K 5% 1/16W	R881	1-216-841-11	METAL	47K 5% 1/16W
R809	1-216-837-11	METAL	22K 5% 1/16W	R882	1-216-841-11	METAL	47K 5% 1/16W
R810	1-216-829-11	METAL	4.7K 5% 1/16W	R883	1-216-841-11	METAL	47K 5% 1/16W
R811	1-216-833-11	METAL	10K 5% 1/16W	R884	1-216-841-11	METAL	47K 5% 1/16W
R812	1-216-833-11	METAL	10K 5% 1/16W	R885	1-216-841-11	METAL	47K 5% 1/16W
R813	1-216-833-11	METAL	10K 5% 1/16W	R886	1-216-857-11	METAL	1M 5% 1/16W
R814	1-216-833-11	METAL	10K 5% 1/16W	R887	1-216-857-11	METAL	1M 5% 1/16W
R815	1-216-833-11	METAL	10K 5% 1/16W	R888	1-216-841-11	METAL	47K 5% 1/16W
R816	1-216-833-11	METAL	10K 5% 1/16W	R889	1-216-841-11	METAL	47K 5% 1/16W
R817	1-216-829-11	METAL	4.7K 5% 1/16W	R891	1-216-819-11	METAL	680 5% 1/16W
R818	1-216-829-11	METAL	4.7K 5% 1/16W	R892	1-216-841-11	METAL	47K 5% 1/16W
R819	1-216-829-11	METAL	4.7K 5% 1/16W	R893	1-216-817-11	METAL	470 5% 1/16W
R820	1-216-829-11	METAL	4.7K 5% 1/16W	R895	1-216-864-11	METAL	0 5% 1/16W
R821	1-216-829-11	METAL	4.7K 5% 1/16W	R896	1-216-813-11	METAL	220 5% 1/10W
R822	1-216-829-11	METAL	4.7K 5% 1/16W	R897	1-216-813-11	METAL	220 5% 1/10W
R823	1-216-829-11	METAL	4.7K 5% 1/16W	R898	1-216-813-11	METAL	220 5% 1/10W
R824	1-216-829-11	METAL	4.7K 5% 1/16W	R899	1-216-813-11	METAL	220 5% 1/10W
R825	1-216-829-11	METAL	4.7K 5% 1/16W	R900	1-216-813-11	METAL	220 5% 1/10W
R826	1-216-841-11	METAL	47K 5% 1/16W	R901	1-216-813-11	METAL	220 5% 1/10W
R827	1-216-841-11	METAL	47K 5% 1/16W	R902	1-216-813-11	METAL	220 5% 1/10W
R828	1-216-841-11	METAL	47K 5% 1/16W				
R829	1-216-841-11	METAL	47K 5% 1/16W				
R830	1-216-839-11	METAL	33K 5% 1/16W				
R831	1-216-837-11	METAL	22K 5% 1/16W				
R832	1-216-833-11	METAL	10K 5% 1/16W	S705	1-692-088-41	SWITHC, TACTILE	
R833	1-216-841-11	METAL	47K 5% 1/16W	S706	1-571-684-11	SWITCH, TACTIL	
						<SWITCH>	

HM-22(L)/22P(L) IF-27 KY-15

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>
<THERMISTOR>											
TH701	1-809-357-21	THERMISTOR, NTC (2125)				Q1	8-729-901-01	TRANSISTOR DTC144EK			
		<CRYSTAL>				Q2	8-729-140-75	TRANSISTOR 2SD999-CLK			
X701	1-579-907-21	VIBRATOR, CERAMIC				R1	1-216-631-11	METAL	150	0.50%	1/10W
X702	1-579-070-41	VIBRATOR, CRYSTAL				R5	1-216-631-11	METAL	150	0.50%	1/10W
X703	1-579-906-21	VIBRATOR, CERAMIC				R7	1-216-049-00	METAL	1K	5%	1/10W

*A-8275-446-B IF-27 BOARD, COMPLETE											

<CAPACITOR>											
C1	1-163-009-11	CERAMIC	0.001uF	10%	50V	RL1	1-515-622-11	RELAY			
C2	1-163-038-00	CERAMIC	0.1uF		25V	RL2	1-515-622-11	RELAY			
C3	1-124-589-11	ELECT	47uF	20%	16V	RL3	1-515-622-11	RELAY			
<CONNECTOR>											
CN1	1-506-486-11	PIN, CONNECTOR 7P				S1	1-572-084-11	SWITCH, SLIDE			
CN2	1-506-485-11	PIN, CONNECTOR 6P				*****					
CN3	1-564-014-11	PIN, CONNECTOR 4P				*A-8275-438-A KY-15 BOARD, COMPLETE					
CN4	1-506-483-21	PIN, CONNECTOR 4P				*****					
<DIODE>											
D1	8-719-400-18	DIODE MA152WK				C803	1-163-038-00	CERAMIC	0.1uF	25V	
D2	8-719-108-12	DIODE RD9.1E-W				C804	1-163-009-11	CERAMIC	0.001uF	10%	50V
D3	8-719-108-12	DIODE RD9.1E-W				C805	1-163-038-00	CERAMIC	0.1uF		25V
D4	8-719-108-12	DIODE RD9.1E-W				C807	1-163-031-11	CERAMIC	0.1uF		50V
D5	8-719-108-12	DIODE RD9.1E-W				<CONNECTOR>					
D6	8-719-108-12	DIODE RD9.1E-W				CN801	*1-506-486-11	PIN, CONNECTOR 7P			
D7	8-719-108-12	DIODE RD9.1E-W				CN802	*1-506-486-11	PIN, CONNECTOR 7P			
D8	8-719-800-76	DIODE 1SS226				CN803	1-506-493-11	PIN, CONNECTOR 14P			
D9	8-719-800-76	DIODE 1SS226				CN805	*1-563-863-21	SOCKET, CONNECTOR 26P			
<FILTER>											
FL1	1-236-738-11	FILTER, EMI				CN806	1-506-484-11	PIN, CONNECTOR 5P			
FL2	1-236-738-11	FILTER, EMI				<DIODE>					
FL3	1-236-738-11	FILTER, EMI				D802	8-719-800-76	DIODE 1SS226			
FL4	1-236-738-11	FILTER, EMI				D804	8-719-800-76	DIODE 1SS226			
FL5	1-236-738-11	FILTER, EMI				D806	8-719-800-76	DIODE 1SS226			
FL6	1-236-738-11	FILTER, EMI				<IC>					
FL7	1-236-738-11	FILTER, EMI				IC802	8-759-988-13	IC LM393PS-T1			
FL8	1-236-738-11	FILTER, EMI				<JUMPER>					
FL9	1-236-738-11	FILTER, EMI				JR821	1-216-296-00	METAL GLAZE	0	5%	1/8W
<JACK>						JR822	1-216-295-11	METAL GLAZE	0	5%	1/10W
J1	1-691-274-11	CONNECTOR				JR824	1-216-296-00	METAL GLAZE	0	5%	1/8W
J2	1-691-274-11	CONNECTOR				JR825	1-216-296-00	METAL GLAZE	0	5%	1/8W
J3	1-569-803-11	CONNECTOR, (S) TERMINAL 4P				JR828	1-216-296-00	METAL GLAZE	0	5%	1/8W
J4	1-569-803-11	CONNECTOR, (S) TERMINAL 4P				JR831	1-216-296-00	METAL GLAZE	0	5%	1/8W
J5	1-507-792-00	JACK				JR832	1-216-296-00	METAL GLAZE	0	5%	1/8W
<JUMPER>						JR833	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR1	1-216-296-00	METAL GLAZE	0	5%	1/8W	JR834	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR2	1-216-296-00	METAL GLAZE	0	5%	1/8W	JR835	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR3	1-216-296-00	METAL GLAZE	0	5%	1/8W	<TRANSISTOR>					
JR4	1-216-295-11	METAL GLAZE	0	5%	1/10W	Q801	8-729-900-53	TRANSISTOR DTC114EK			
JR5	1-216-296-00	METAL GLAZE	0	5%	1/8W	Q802	8-729-900-53	TRANSISTOR DTC114EK			
<TRANSISTOR>											
JR6	1-216-296-00	METAL GLAZE	0	5%	1/8W	<RESISTOR>					
JR7	1-216-296-00	METAL GLAZE	0	5%	1/8W	JR89	1-216-296-00	METAL	0	5%	1/10W
JR8	1-216-296-00	METAL	0	5%	1/10W	R801	1-216-295-11	METAL	0	5%	1/10W
JR9	1-216-296-00	METAL	0	5%	1/10W	R802	1-216-295-11	METAL	0	5%	1/10W
JR10	1-216-296-00	METAL	0	5%	1/10W	R803	1-216-295-11	METAL	0	5%	1/10W

The components identified by shading and mark **▲** are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SWITCHING REGULATOR

Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
C106	9-907-097-01	ELECT	470MF 200V	D201	8-719-501-34	DIODE S3VC40R	
C107	9-900-522-01	CERAMIC	2200PF 250V	D202	8-719-501-34	DIODE S3VC40R	
C108	9-900-525-01	CERAMIC	0.047MF 400V	D203	8-719-200-02	DIODE 10E-2	
C109	9-907-098-01	CERAMIC	220PF 1KV	D204	9-900-535-01	DIODE AU02Z	
C110	1-130-491-00	CERAMIC	0.047MF 50V	D205	9-904-797-01	DIODE RK44	
C111	1-124-122-11	ELECT	100MF 50V	D206	9-904-797-01	DIODE RK44	
C112	1-126-967-11	ELECT	47MF 50V	D207	8-719-501-34	DIODE S3VC40R	
C113	9-900-525-01	CERAMIC	0.047MF 400V	D208	8-719-160-68	DIODE RD18F	
C114	9-907-098-01	CERAMIC	220PF 1KV	D209	8-719-982-04	DIODE ERB81-004	
C115	1-128-578-91	ELECT	1MF 100V	D210	9-904-799-01	DIODE MA2120	
C116	1-130-495-00	FILM	0.1MF 50V			<FUSE>	
C118	9-907-095-01	CERAMIC	2200PF 250V	F101	9-907-103-01	FUSE 4A 250V	
C119	9-907-095-01	CERAMIC	2200PF 250V	F102	9-907-103-01	FUSE 4A 250V	
C120	9-907-096-01	CERAMIC	4700PF 250V			<IC>	
C121	9-907-097-01	ELECT	470MF 200V				
C122	1-130-491-00	CERAMIC	0.047MF 50V	IC101	9-904-782-01	IC STR-S6525	
C123	1-136-189-00	CERAMIC	0.1MF 250V	IC102	8-759-977-63	IC MA2830	
C124	1-136-189-00	CERAMIC	0.1MF 250V	IC103	8-749-923-66	IC STR83145	
C125	9-907-099-01	ELECT	4.7MF 400V	IC201	8-759-420-19	IC AN1431T	
C126	1-124-903-11	ELECT	1MF 50V	IC202	8-759-135-80	IC UPC358C	
C201	9-907-113-01	CERAMIC	1000PF 1KV				
C202	9-907-114-01	ELECT	1000MF 35V	IC203	8-759-420-19	IC AN1431T	
C203	1-124-906-11	ELECT	4.7MF 50V	IC204	8-759-420-19	IC AN1431T	
C204	9-907-114-01	ELECT	1000MF 35V	IC205	8-749-920-43	IC SI-3050CA	
C205	1-126-965-51	ELECT	22MF 50V	IC206	8-749-921-21	IC SI-3120C	
C207	1-130-483-00	FILM	0.01MF 50V	IC207	8-749-920-43	IC SI-3050CA	
C208	9-907-113-01	CERAMIC	1000PF 1KV				
C209	1-126-927-11	ELECT	2200MF 10V	IC208	8-749-920-43	IC SI-3050CA	
C210	1-126-927-11	ELECT	2200MF 10V			<COIL>	
C211	1-124-903-11	ELECT	1MF 50V				
C212	1-126-926-11	ELECT	1000MF 10V	L101	9-907-102-01	FILTER	
C213	1-126-933-11	ELECT	100MF 10V	L102	9-907-102-01	FILTER	
C214	1-126-933-11	ELECT	100MF 10V	L103	9-904-796-01	BEADS CORE	
C215	9-907-113-01	CERAMIC	1000PF 1KV	L104	9-904-796-01	BEADS CORE	
C216	1-124-557-11	ELECT	1000MF 25V	L201	9-902-553-01	BEADS CORE	
C217	1-216-933-11	ELECT	100MF 16V				
C218	1-126-926-11	ELECT	1000MF 10V	L202	9-902-553-01	BEADS CORE	
C219	1-126-933-11	ELECT	100MF 10V	L203	9-907-112-01	CHOKE COIL	
C220	1-130-483-00	FILM	0.01MF 50V	L204	9-902-553-01	BEADS CORE	
C222	1-124-122-11	ELECT	100MF 50V	L205	9-907-112-01	CHOKE COIL	
				L206	9-902-553-01	BEADS CORE	
						<CONNECTOR>	
CN1	9-907-104-01	CONNECTOR 4P		PC101	8-749-923-50	PHOTO COUPLER PC111YC	
CN2	9-907-105-01	CONNECTOR 2P		PC102	8-749-923-50	PHOTO COUPLER PC111YC	
CN3	9-907-105-01	CONNECTOR 2P		PC201	8-719-161-00	PHOTO COUPLER PS2501	
CN901	1-560-892-00	CONNECTOR 4P					
CN902	1-560-894-00	CONNECTOR 6P				<TRANSISTOR>	
CN903	1-568-792-11	CONNECTOR 15P		Q101	9-904-781-01	TRANSISTOR 2SC2061	
CN904	1-506-468-11	CONNECTOR 3P		Q201	8-729-900-80	TRANSISTOR DTC114ES	
CN905	1-506-468-11	CONNECTOR 3P		Q202	8-729-900-80	TRANSISTOR DTC114ES	
CN906	1-564-013-31	CONNECTOR 3P		Q203	8-729-900-80	TRANSISTOR DTC114ES	
CN907	1-568-779-11	CONNECTOR 2P		Q204	8-729-900-80	TRANSISTOR DTC114ES	
				Q205	8-729-900-80	TRANSISTOR DTC114ES	
						<DIODE>	
D101	8-719-500-58	DIODE D3SBA60					
D102	8-719-030-25	DIODE AG01A					
D103	9-904-898-01	DIODE AU02A		R101	1-202-719-00	SOLID	1M
D104	9-907-090-01	DIODE RD47E		R102	9-904-783-01	THERMISTOR	25°C
D105	8-719-116-86	DIODE RD24JSB		R103	1-218-642-11	FILM	1W
D106	8-719-200-02	DIODE 10E-2		R104	1-218-642-11	FILM	1W
D107	9-900-514-01	DIODE MA165		R105	1-260-127-11	CARBON	220K
D108	9-902-050-01	DIODE ERA15-16		R106	1-260-127-11	CARBON	1/2W
D109	9-900-514-01	DIODE MA165		R107	1-215-925-11	FILM	3W
D110	9-902-050-01	DIODE ERA15-16		R108	1-215-925-11	FILM	22K
D111	9-902-050-01	DIODE ERA15-16		R109	1-215-882-00	FILM	22
				R110	9-907-093-01	CEMENT	0.15
							2W

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SWITCHING REGULATOR

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
R111	1-260-064-11	CARBON	1	1/2W			<VARIABLE RESISTOR>	
R112	1-260-080-11	CARBON	27	1/2W	VR201	9-907-110-01	RES, VER, CARBON	2K
R113	1-247-855-31	CARBON	10K	1/4W	VR202	9-907-111-01	RES, VER, CARBON	500
R114	1-249-412-11	CARBON	390	1/4W	VR203	1-238-570-11	RES, VER, CARBON	2K
R115	1-249-437-11	CARBON	47K	1/4W	VR204	1-238-570-11	RES, VER, CARBON	2K
R116	1-249-411-11	CARBON	330	1/4W			*****	
R117	1-249-423-11	CARBON	3.3K	1/4W			MISCELLANEOUS	
R118	1-247-883-00	CARBON	150K	1/4W			*****	
R119	1-247-883-00	CARBON	150K	1/4W				
R120	1-249-441-11	CARBON	100K	1/4W				
R122	1-215-928-11	FILM	68K	3W				
R123	1-215-863-11	CARBON	100K	1/4W				
R124	1-215-863-11	CARBON	100K	1/4W				
R125	1-260-091-11	CARBON	220	1/2W				
R126	9-904-783-01	THERMISTOR	5	25°C				
R127	1-260-127-11	CARBON	220K	1/2W				
R128	1-260-127-11	CARBON	220K	1/2W				
R129	1-249-389-11	CARBON	4.7	1/4W				
R130	1-247-883-00	CARBON	150K	1/4W				
R131	1-249-408-11	CARBON	180	1/4W				
R132	1-249-441-11	CARBON	100K	1/4W				
R201	1-215-916-00	FILM	680	3W				
R202	1-215-916-00	FILM	680	3W				
R203	1-260-099-11	CARBON	1K	1/2W				
R204	1-247-855-31	CARBON	10K	1/4W				
R205	1-247-855-31	CARBON	10K	1/4W				
R206	1-249-420-11	CARBON	1.8K	1/4W				
R207	1-244-417-11	CARBON	1K	1/4W				
R208	1-249-423-11	CARBON	3.3K	1/4W				
R209	1-249-415-11	CARBON	680	1/2W				
R210	9-902-556-01	METAL	1	1/4W				
R211	1-247-855-31	CARBON	10K	1/4W				
R212	9-904-801-01	FILM	8.25K	1/4W				
R213	1-247-855-31	CARBON	10K	1/4W				
R214	1-247-855-31	CARBON	10K	1/4W				
R215	1-247-855-31	CARBON	10K	1/4W				
R216	1-247-855-31	CARBON	10K	1/4W				
R217	1-249-425-11	CARBON	4.7K	1/4W				
R218	1-247-855-31	CARBON	10K	1/4W				
R219	1-247-855-31	CARBON	10K	1/4W				
R220	1-214-736-00	FILM	2K	1/4W			ACCESSORY & PACKING MATERIALS	
R221	1-214-753-00	FILM	10K	1/4W			*****	
R222	1-260-083-11	CARBON	47K	1/2W				
R223	1-244-417-11	CARBON	1K	1/4W				
R224	1-249-419-11	CARBON	1.5K	1/4W				
R225	1-247-855-31	CARBON	10K	1/4W				
R226	(9-907-107-01	METAL OXIDE	430	1/4W				
	9-907-094-01	METAL OXIDE	1.2K	1/4W				
R227	9-907-108-01	CARBON	0.22	1/4W				
R228	9-907-108-01	CARBON	0.22	1/4W				
R229	(9-907-109-01	METAL OXIDE	1.3K	1/4W				
	9-907-107-01	METAL OXIDE	430	1/4W				
R230	1-249-416-11	CARBON	820	1/4W				
R231	1-249-414-11	CARBON	560	1/4W				
		<RELAY>						
RL201	9-907-115-01	RELAY						
		<TRANSFORMER>						
T101	9-907-100-01	SWITCHING						
T102	9-907-101-01	SWITCHING						

<u>Ref. No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
HARDWARE LIST							

7-621-255-15		SCREW +P 2X3					
7-621-259-35		SCREW +P 2.6X5					
7-621-284-40		SCREW +P 2.6X10					
7-621-759-75		+PSW. 2.6X10					
7-682-166-01		SCREW +P 4X20					
7-682-645-01		SCREW +PS 3X4					
7-682-647-09		SCREW +PS 3X6					
7-685-103-19		SCREW +P 2X5 TYPE2 NON-SLIT					
7-685-134-19		SCREW +P 2.6X8 TYPE2 NON-SLIT					
7-685-534-19		SCREW +BTP 2.6X8 TYPE2 N-S					
7-685-645-79		SCREW +BVTP 3X6 TYPE2 IT-3					
7-685-852-01		SCREW +BVTT 2X5 (S)					
7-685-862-01		SCREW +BVTT 2.6X6 (S)					

SECTION 7

ELECTRICAL ADJUSTMENT

7-1. PREPARATION BEFORE ADJUSTMENT (UP-1200A)

The measurement equipment below is used for adjustment.

7-1-1. Equipment Required

- 1) Monitor television
- 2) Dual-trace oscilloscope with band of more than 30 MHz and delay mode
(Use a 10:1 probe unless otherwise specified.)
- 3) Frequency counter
- 4) Signal generator video output terminals (SGA-300 and SGA-130)
- 5) Digital voltmeter
- 6) Video print paper
- 7) Video print cartridge

7-1-2. Connection of the Equipment

As shown in Fig. 7-1, each measurement equipment is connected according to instructions from the input terminal (S video or video) to perform the adjustment. Each input terminal is specified in a signal column by parentheses. If not specified, either input terminal can be used.

Note: For the adjustment specified as an S video input terminal, the product specifications of this unit may not be satisfied when the adjustment is performed by a video input terminal. Be sure to perform the adjustment according to instructions.

When the adjustment is performed using the VTR with an S video output terminal as a signal source, the performance of this unit varies depending on the VTR. Use the pattern generator with a Y/C separation output terminal as far as possible.

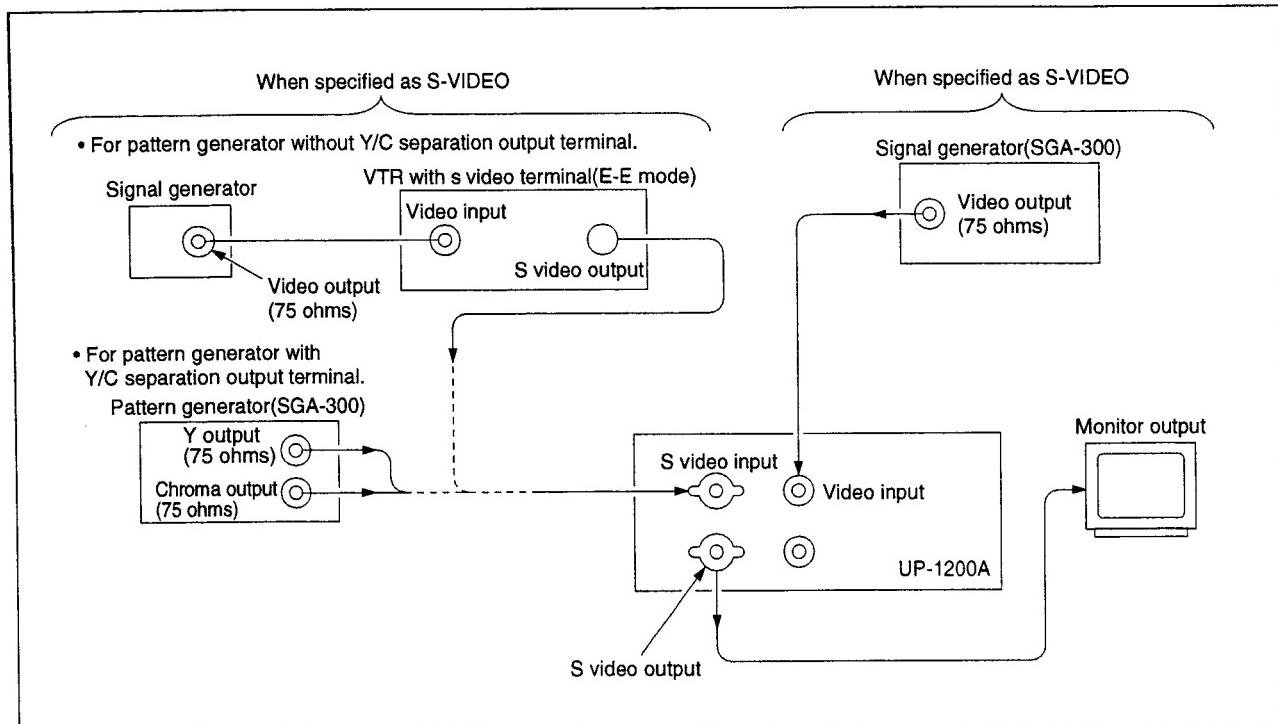


Fig. 7-1.

7-1-3. Confirmation of the Input Signal

The video signal generated from a pattern generator is used for video circuit adjustment as an adjustment signal. Therefore, it is necessary that this video output signal satisfies the required specification.

1. During S video (S VIDEO) input

Connect an oscilloscope to the Y signal terminal of the S video input terminal, and confirm that the sync signal of a Y signal is 286 mV, the amplitude of the video portion is 714 mV, and the setup level is 0 mV. (When the VTR with an S video output terminal is used, confirm that no chroma signal and burst signal remain.) Moreover, connect an oscilloscope to the chroma signal terminal of the S video input terminal, and confirm that the burst signal amplitude of a chroma signal is flat (286 mV) and that the amplitude ratio of a burst signal to a chroma signal is 0.30 : 0.66. The Y signal and chroma signal used for the adjustment are shown in Fig. 7-2.

The setup level is the potential difference between the black and pedestal levels.

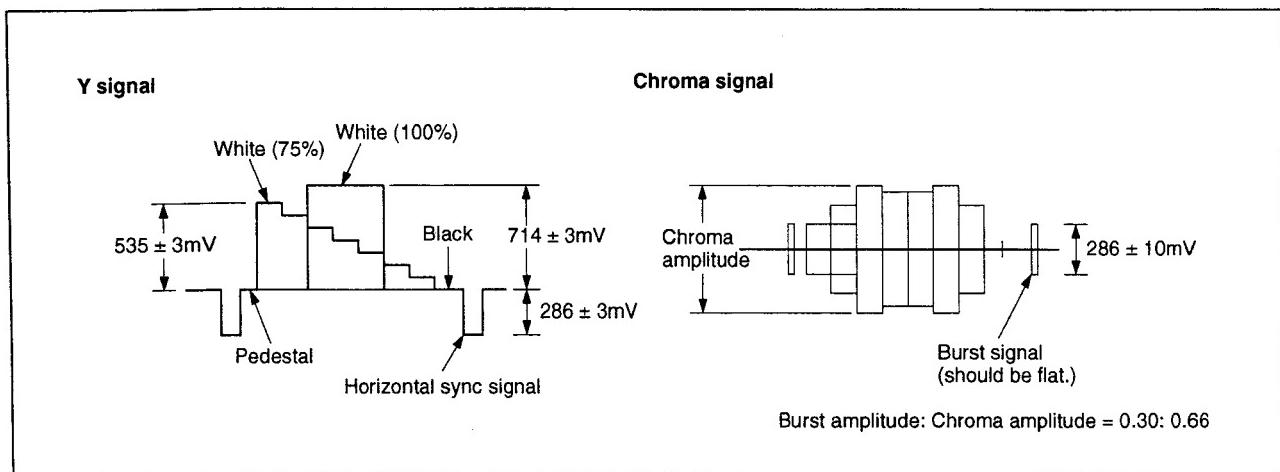


Fig. 7-2. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

2. During video (VIDEO) input

Connect an oscilloscope to the video input terminal, and confirm that the sync signal amplitude of a video signal is 286 mV, the amplitude of the video portion is 714 mV, the setup level is 0 mV, the amplitude of a burst signal is flat (286 mV), and the level ratio of a burst signal to a "red" signal is 0.30 : 0.66.

The video signal (color-bar) used for the adjustment is shown in Fig. 7-3.

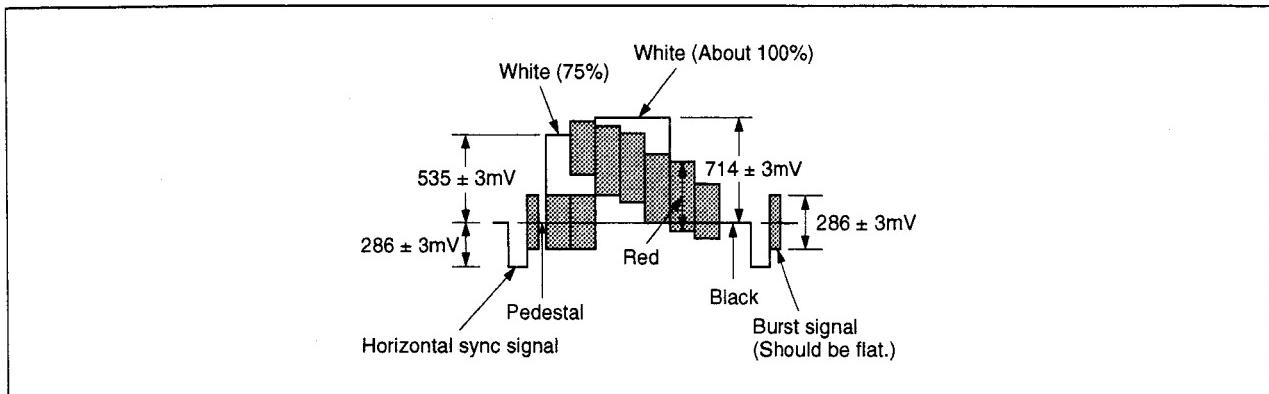


Fig. 7-3. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

7-1-4. How to Operate Adjustment Remote Controller RM-95 (J-6082-053-A)

For the connection of adjustment remote controller RM-95, insert the RM-95 terminal into J101 LANC jack on the VA-76 board in the UP-1200 series.

Before performing each adjustment, reset the corresponding protector as shown in the table below.

Page	6	Data	80	Address	00
------	---	------	----	---------	----

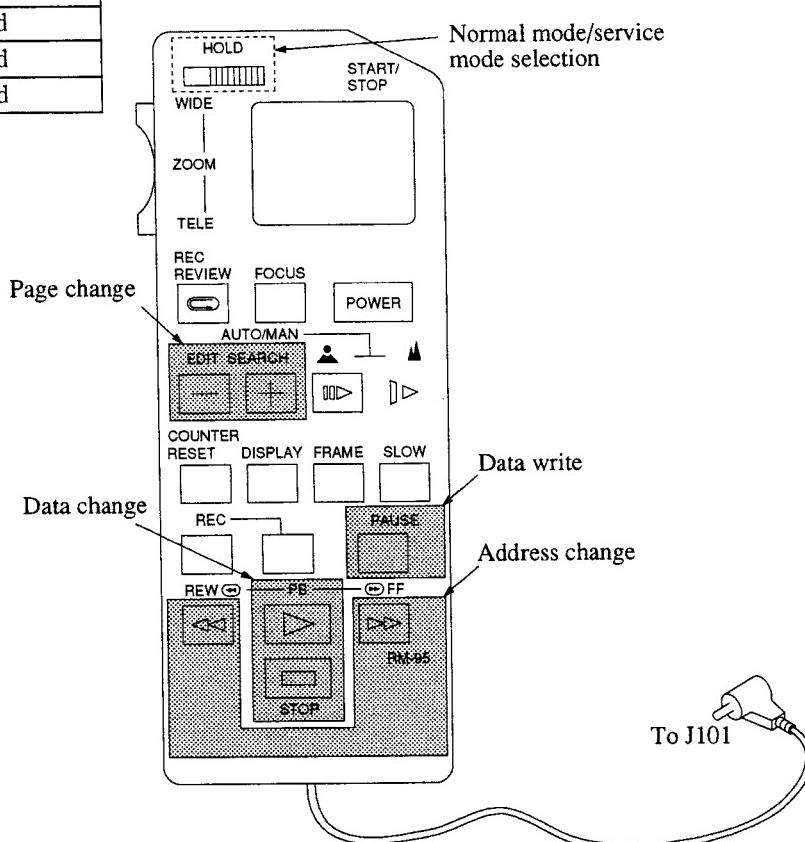
However, any reset is not required during continuous adjustment. Press the PAUSE button for every adjustment item and write each data.

1. Menu setting

The menu is set in the initial state (refer to the table below).

Number of prints	1
Memo	No memo print
Memory setting	Standard
Print setting	Standard
Picture quality setting	Standard

Adjustment remote controller RM-95 (J-6082-053-A)



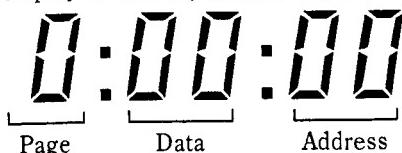
7-1-5. Service Mode

1. Setting the service mode

The service mode is classified into an adjustment mode that adjusts the EVR and a test mode that displays the state of the unit.

The test mode and adjustment mode are entered if the adjustment remote controller (with the HOLD switch set to HOLD) is connected.

LCD display of the adjustment remote controller



2. Video circuit adjustment

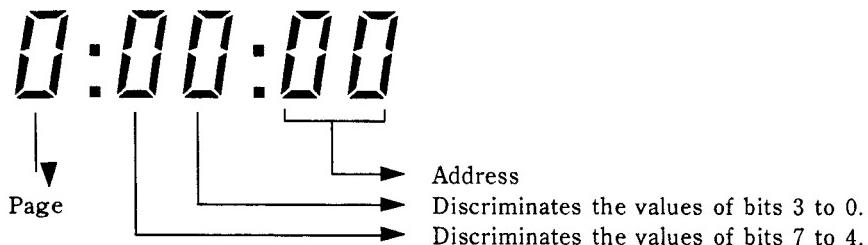
When F page data was erased during EE-PROM (IC309 on the VA-76 board) replacement, enter the initial value of the F page and adjust the video circuit.

For details of the initial value, refer to the "F Page Address Book" in "Service Man Mode".

3. Discrimination of the bit value

In subsequent items, it is necessary to discriminate the bit value by the display data of an adjustment remote controller. On whether the bit value is "1" or "0", discriminate according to the data shown in the table below.

Adjustment remote controller display



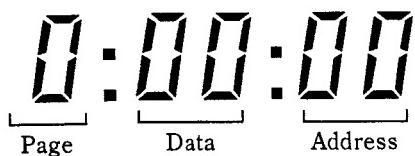
Remote controller display	Bit value			
	Bit 3 or 7	Bit 2 or 6	Bit 1 or 5	Bit 0 or 4
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
A(R)	1	0	1	0
B(J)	1	0	1	1
C(c)	1	1	0	0
D(d)	1	1	0	1
E(E)	1	1	1	0
F(F)	1	1	1	1

(Example) When the display data of the remote controller is "8E", the values of bits 7 to 4 can be discriminated by column A, and the values of bits 3 to can be discriminated by column B.

Command name	Function	Command button
Page Up	Increments the page by one.	Edit Search +
Page Down	Decrements the page by one.	Edit Search -
Address Up	Increments the address by one.	Fast Forward ▶▶
Address Down	Decrements the address by one.	Rewind ▶◀
Data Up	Increments the data by one.	Play Back ▶
Data Down	Decrements the data by one.	Stop □
Store	Writes data in an EE-PROM RAM.	Pause □

4. Entering the test signal (Transmission to memory control)

LCD display of the adjustment remote controller



- 1) Insert the RM-95 into the control terminal (J-1 on the VA-14 board).
- 2) Set the HOLD switch of the RM-95 to the service mode. (Usually set to the service mode.)
- 3) Turn on the power of the UP-1800/1850 and set each signal as shown below.
※ The input signal is a non-signal.

[Color-bar signal]

Page	7	Data	2b	Address	20
------	---	------	----	---------	----

[Stairstep signal(H)]

Page	7	Data	27	Address	20
------	---	------	----	---------	----

[Stairstep signal(V)]

Page	7	Data	28	Address	20
------	---	------	----	---------	----

[Ramp signal(H)]

Page	7	Data	29	Address	20
Page	7	Data	2C	Address	20

[Ramp signal(V)]

Page	7	Data	2A	Address	20
------	---	------	----	---------	----

5. Infrared remote controller check

Page	7	Data		Address	07
------	---	------	--	---------	----

※ The reception-time state of an infrared remote controller can be confirmed by the number of display data items.

Data	Reception-time state	Data	Reception-time state
01	Power supply	42	MENU
10	SOURCE/MEMORY	43	EXEC
11	Memory IN	14	STOP
13	Print	1C	MEMORY PAGE
30	UP	5D	Print quantity +
31	DOWN	5E	Print quantity -
32	LEFT	3C	Color adjustment
33	RIGHT	4B	MULTI PICTURE

6. Key input check

Page	7	Data		Address	11
------	---	------	--	---------	----

Data	Key input	Data	Key input
09	SOURCE/MEMORY	14	RIGHT
0A	MEMORY IN	11	MENU
0B	PRINT	12	EXEC
15	UP	01	STOP
16	DOWN	0C	MEMORY/PAGE
13	LEFT		

※ The status of each key can be confirmed in real time.

7. Key input check (edge)

Page	7	Data		Address	12
------	---	------	--	---------	----

※ Write the data below and press the PAUSE button. The state obtained when the key was pressed is then entered.

Data	Key input	Data	Key input
10	SOURCE/MEMORY	33	RIGHT
11	MEMORY IN	42	MENU
13	PRINT	43	EXEC
30	UP	14	STOP
31	DOWN	1C	MEMORY/PAGE
32	LEFT		

8. LED control check

Page	7	Data		Address	14
------	---	------	--	---------	----

※ The LED is made turned on forcibly.

Data	Operation
00	Normal
01	Only the error LED () lights.
02	Only the print LED () lights.

9. Buzzer sound check

Page	7	Data		Address	16
------	---	------	--	---------	----

※ Write any data and press the PAUSE button. The "buzzer" then sounds.

10. Sharpness adjustment

Page	7	Data		Address	40
------	---	------	--	---------	----

Data	Level position
F9	MIN
00	CENTER
07	MAX

※ Write the above data and press the PAUSE button. The sharpness data is then changed.

11. Picture quality set check

Page	7	Data		Address	
------	---	------	--	---------	--

Address		
45	B	Offset level
46	G	
47	R	
48	B	GAIN
49	G	
4A	R	

Offset data	Level position	Gain data
08	MIN	3F
00	CENTER	80
38	MAX	E3

12. [Mode control: ROM Ver]

Page	7	Data		Address	01
------	---	------	--	---------	----

※ Indicates the ROM version during mode control.

13. THRU/EE check

Page	7	Data		Address	72
------	---	------	--	---------	----

Data	
01	EE
02	THRU

14. Test pattern memory write check

Page	7	Data		Address	20
------	---	------	--	---------	----

Data	Text pattern
27	Stairstep (H)
28	Stairstep (V)
29	Ramp (H)
2A	Ramp (V)
2B	Color-bar (false)

15. Input signal selection check

Page	7	Data		Address	71
------	---	------	--	---------	----

Data	Input signal
01	VIDEO
02	S VIDEO

16. Motor single-drive check

(1) Head motor

Page	8	Data		Address	1A
------	---	------	--	---------	----

Data	
00	Stop
01*1	Head position UP
02*2	Head position DOWN
08	Home position

*1 The head position changes by one step every time the PAUSE button of the RM-95 is pressed.

*2 Do not perform the DOWN operation in head position-1. This may destroy the unit. If so, turn off the AC power immediately.

(2) Ribbon motor (Roller motor)

Page	8	Data		Address	1A
------	---	------	--	---------	----

Data	
00	Stop
03*1	Roller position UP
04*2	Ribbon winding (continuous)

*1 The roller position changes by one step every time the PAUSE button of the RM-95 is pressed.

*2 Data 04 is continuously driven when the PAUSE button is pressed.

(3) Stepping motor, fan motor, delivery arm position

Page	8	Data		Address	1A
------	---	------	--	---------	----

Data	
00	Stop
05	Stepping motor rotation (continuous)
06	Stepping motor reverse-rotation (continuous)
09	Fan motor rotation
0B	Delivery arm position UP*

* The delivery arm position changes by one step every time the PAUSE button is pressed.

17. Roller position data

Page	8	Data		Address	04
------	---	------	--	---------	----

Data	Position
E0	NULL
00	P0 position
02	P1 position
04	P2 position

18. Paper delivery arm position data

Page	8	Data		Address	05
------	---	------	--	---------	----

Data	Position
0E	NULL
00	Home position
01	Print position

19. Mechanical control ROM version check

Page	8	Data		Address	01
------	---	------	--	---------	----

* Indicates the ROM version during mechanical control.

20. F page address book

Adjustment address	Name	Function () is the adjustment voltage output terminal.	
00			
01			
02			
03			
04			
05			
06			
07			
08			
09			
0A			
0B			
0C			
0D			
0E			
0F			
10			
11	HUECONT	Decoder hue adjustment	[Q329-E]
12	CCONT	Decoder color adjustments 1 and 2	[Q329-E]
13	SHPCT	Decoder sharpness adjustment	[IC311 ⑨]
14	G-GAIN	Green gain adjustment	
15	R-GAIN	Red gain adjustment	
16	B-GAIN	Blue gain adjustment	
17	WH-REF	White REF level adjustment	[R340, 341]
18	BLACK-REF	ABL adjustment 2	[Q323-E]
19	AGCC-OST	Chroma Y AGC Offset	
1A	D/A	D/A REF adjustment	[FL105 or CN501 ①]
1B	AGC OST	AGC level adjustment	[CN101 ㉓]
1C			
1D			
1E			
1F			
20	ERG	Encoder white balance adjustment	[FL105, CN502 ①]
21	DM-LEV		
22	COLOR	INT/EXT detection level adjustment	[IC106 ⑦]
23	CHROMA LEV	Encoder chroma level adjustment	[CN502 ①]
24	BURST LEV	Encoder burst level adjustment	[FL105 or CN501 ①]
25	W-POSIT	AFC phase adjustment	
26			
27	CHAR	OSD level adjustment	[FL105, CN502 ①]
28	ABL OST	ABL adjustment 1	[IC302 ①, ②]
29	TPADJ	Timing pulse adjustment	
2A	EBG	Encoder white balance adjustment	[FL105 or CN501 ①]
2B	HUE	Encoder hue adjustment	
2C			
2D			
2E			
2F			

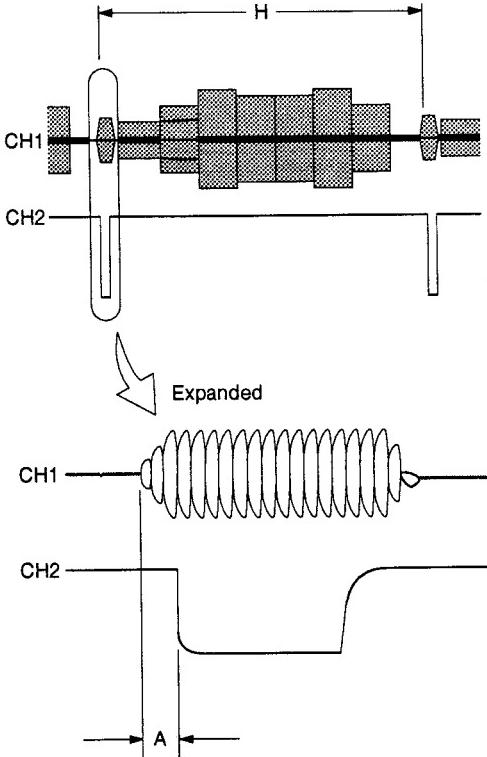
UP-1200A

7-2. VIDEO CIRCUIT ADJUSTMENT (VA-76 BOARD)

7-2-1. INT/EXT Detection Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none">Input signal: Color-bar (VIDEO)Measurement equipment: Digital voltmeter	Measurement point: Pin ⑦ of IC106 or positive ("+" side of C103 2.0 ± 0.05 V DC	Adjustment page	F
		Adjustment address	22

7-2-2. BGP Phase Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none">Input signal: Color-bar (S VIDEO)Measurement equipment: Oscilloscope	Measurement point: Pin ⑬ of C376 or IC311 (CH1) Pin ⑯ of IC311 (CH2)  $A = 0.77 \pm 0.07 \mu\text{ sec}$	Ⓐ RV304

7-2-3. APC Free-Running Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with the input cable removed) Measurement equipment: Frequency counter 	<p>Measurement point: Emitter of Q334 or R472 Shortcircuit C358 to ground and C376 to ground. $f = 3.579545 \text{ MHz} \pm 20\text{Hz}$</p>	Ⓐ RV301

7-2-4. INT Sync Generator Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Frequency counter 	<p>Measurement point: Pin ④ of IC130 or pin ① of IC128 $f = 3.579545 \text{ MHz} \pm 20 \text{ Hz}$</p>	Ⓐ CT102

7-2-5. AFC Error Voltage Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Digital voltmeter 	<p>Measurement point: CC101 or R110 $-0.5 \pm 0.2 \text{ V DC}$</p>	Ⓐ CT101

7-2-6. Y/C Separation Y-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q116 or R218</p> $A = 1.00 \pm 0.03 \text{ V p-p}$	Ⓐ RV302

7-2-7. Y/C Separation Chroma-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q121 or R229</p> <p>$A = 286 \pm 30 \text{ mV p-p}$</p>	Ⓐ RV303

7-2-8. Decoder Hue Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar 75% (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q329</p> <p>The peak-value colors (white, cyan, magenta, and blue), and the bottom-value colors (yellow, green, and red) should flat and linear.</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>11</td> </tr> </table>	Adjustment page	F	Adjustment address	11
Adjustment page	F					
Adjustment address	11					

7-2-9. Decoder Color (1) Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar 75% (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q329</p> <p>$A = 0 \pm 50 \text{ mV}$ (Adjust so that the difference in level of each color is zero ("0").)</p> <p>If the difference in level exists in each color, readjust the hue.</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>12</td> </tr> </table>	Adjustment page	F	Adjustment address	12
Adjustment page	F					
Adjustment address	12					

7-2-10. ABL Adjustment (1)

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Black burst (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q302</p> <p>$A = 20 \pm 20 \text{ mV}$</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>28</td> </tr> </table> <p>DATA 80</p>	Adjustment page	F	Adjustment address	28
Adjustment page	F					
Adjustment address	28					

7-2-11. ABL Adjustment (2)

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q323</p> <p>$A = 20 \pm 20 \text{ mV}$</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>18</td> </tr> </table> <p>DATA 80</p>	Adjustment page	F	Adjustment address	18
Adjustment page	F					
Adjustment address	18					

7-2-12. White REF Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (only Y)(S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: R348 (CL304) (red) (CH1) R341 (white) (CH2)</p> <p>Adjust so that the red (R348 or CL304) of a Y signal component coincides with the peak level of a white REF pulse (R341). $A = \text{Within } 20 \text{ mV}$</p>	<p>Adjustment page F Adjustment address 17</p>

7-2-13. AGC Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ② of CN101 (G OUT)</p> <p>$A = 1.90 \pm 0.05 \text{ V p-p}$</p>	<p>Adjustment page F Adjustment address 1B</p>

7-2-14. Decoder Color (2) Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ② of CN101 (B OUT)</p> <p>$1.90V$ $A = 1.95 \pm 0.05 \text{ V p-p}$</p>	<p>Adjustment page F Adjustment address 12</p>

7-2-15. Decoder Sharpness Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ⑨ of IC311</p> <p>$A/B = 1.15 \pm 0.05$ (Level ratio of 1 MHz to 4.5 MHz)</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>13</td> </tr> </table>	Adjustment page	F	Adjustment address	13
Adjustment page	F					
Adjustment address	13					

7-2-16. Encoder White Balance Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Mode: Input picture Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope Vectorscope 75-ohm termination 	<p>Measurement point: Video output terminal</p> <ul style="list-style-type: none"> For vectorscope <p>The white luminescent spot should coincide with the origin.</p> <ul style="list-style-type: none"> For oscilloscope <p>Adjust so that the chroma signal component (3.58 MHz) that leaks to the white portion of an output waveform is minimum.</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>20(ERG) 2A(EBG)</td> </tr> </table>	Adjustment page	F	Adjustment address	20(ERG) 2A(EBG)
Adjustment page	F					
Adjustment address	20(ERG) 2A(EBG)					

7-2-17. D/A REF Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Video output terminal (75-ohm termination)</p> <p> $A = 659 \pm 20 \text{ mV}$ $B = 286 \pm 30 \text{ mV}$ </p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>1A</td> </tr> </table>	Adjustment page	F	Adjustment address	1A
Adjustment page	F					
Adjustment address	1A					

7-2-18. Encoder Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Vectorscope Video output terminal in 75-ohm termination 	<p>Measurement point: FL105 (VIDEO OUT) or Pin ① of CN502</p> <p> \cdot 66% of length between center of yellow "田" and cross point of R-Y and B-Y axes. </p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>23</td> </tr> </table>	Adjustment page	F	Adjustment address	23
Adjustment page	F					
Adjustment address	23					

7-2-19. Encoder Color Burst Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Non-signal Measurement equipment: Vectorscope 	<p>Measurement point: Video output (in 75-ohm termination)</p> <p>Burst standard position of 75%</p> <p>Set the luminescent spot in the burst level to the 75% position within one luminescent spot.</p>	<p>Adjustment page F</p> <p>Adjustment address 24</p>

7-2-20. S Video Output Y Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Digital Color-bar(※) (VIDEO) Measurement equipment: Oscilloscope S video output Y terminal in 75-ohm termination 	<p>Measurement point: Pin ② of S video output terminal or Pin ③ of CN502 (Y)</p> <p>A = 659 ± 20 mV B = 286 ± 30 mV</p>	<p>Adjustment page 7</p> <p>Adjustment address 20</p> <p>Data 37</p> <p>※ The digital color-bar signal is displayed when it is set as described above by RM-92.</p>

7-2-21. S Video Output Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope S video output C terminal in 75-ohm termination 	<p>Measurement point: Pin ④ of S video output terminal</p> <p>A = 408 ± 30 mV (Yellow) B = 286 ± 30 mV</p>	<p>Adjustment page 7</p> <p>Adjustment address 20</p> <p>Data 37</p> <p>※ The digital color-bar signal is displayed when it is set as described above by RM-92.</p>

7-2-22. OSD Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Non-signal Measurement equipment: Oscilloscope Composite video output C terminal in 75-ohm termination 	<p>Measurement point: Video output terminal (75-ohm termination)</p> <p>White character</p> <p>Chroma signal is added.</p> <p>$A = 500 \pm 30 \text{ mV}$</p>	<p>Adjustment page F</p> <p>Adjustment address 27</p>

UP-1200AEPM

7-1. PREPARATION BEFORE ADJUSTMENT

The measurement equipment below is used for adjustment.

7-1-1. Equipment Required

- 1) Monitor television
- 2) Dual-trace oscilloscope with band of more than 30 MHz and delay mode
(Use a 10:1 probe unless otherwise specified.)
- 3) Frequency counter
- 4) Signal generator video output terminals (TSG-131, TSG-131A, TSG-1411 or SG-408P)
- 5) Digital voltmeter
- 6) Video print paper
- 7) Video print cartridge

7-1-2. Connection of the Equipment

As shown in Fig. 7-1, each measurement equipment is connected according to instructions from the input terminal (S video or video) to perform the adjustment. Each input terminal is specified in a signal column by parentheses. If not specified, either input terminal can be used.

Note: For the adjustment specified as an S video input terminal, the product specifications of this unit may not be satisfied when the adjustment is performed by a video input terminal. Be sure to perform the adjustment according to instructions.

When the adjustment is performed using the VTR with an S video output terminal as a signal source, the performance of this unit varies depending on the VTR. Use the pattern generator with a Y/C separation output terminal as far as possible.

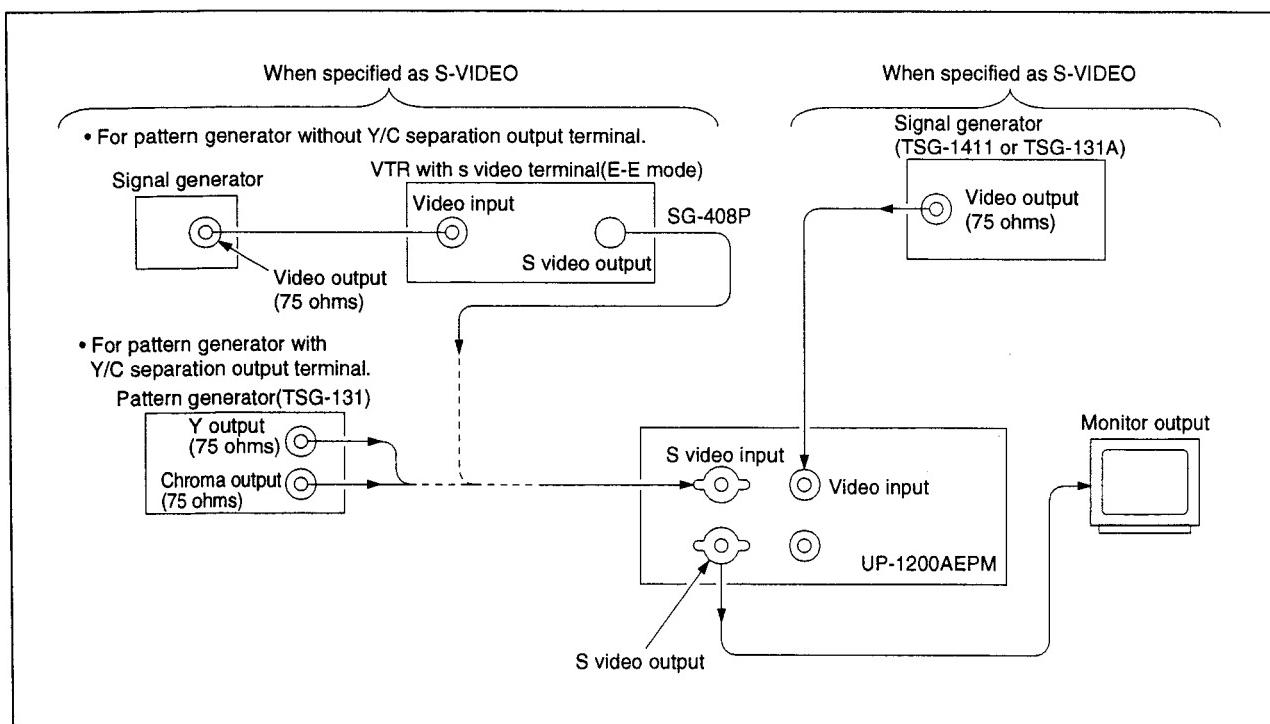


Fig. 7-1.

7-1-3. Confirmation of the Input Signal

The video signal generated from a pattern generator is used for video circuit adjustment as an adjustment signal. Therefore, it is necessary that this video output signal satisfies the required specification.

1. During S video (S VIDEO) input

Connect an oscilloscope to the Y signal terminal of the S video input terminal, and confirm that the sync signal of a Y signal is 300 mV, the amplitude of the video portion is 700 mV, and the setup level is 0 mV. (When the VTR with an S video output terminal is used, confirm that no chroma signal and burst signal remain.) Moreover, connect an oscilloscope to the chroma signal terminal of the S video input terminal, and confirm that the burst signal amplitude of a chroma signal is flat (300 mV) and that the amplitude ratio of a burst signal to a chroma signal is 0.30 : 0.66. The Y signal and chroma signal used for the adjustment are shown in Fig. 7-2.

The setup level is the potential difference between the black and pedestal levels.

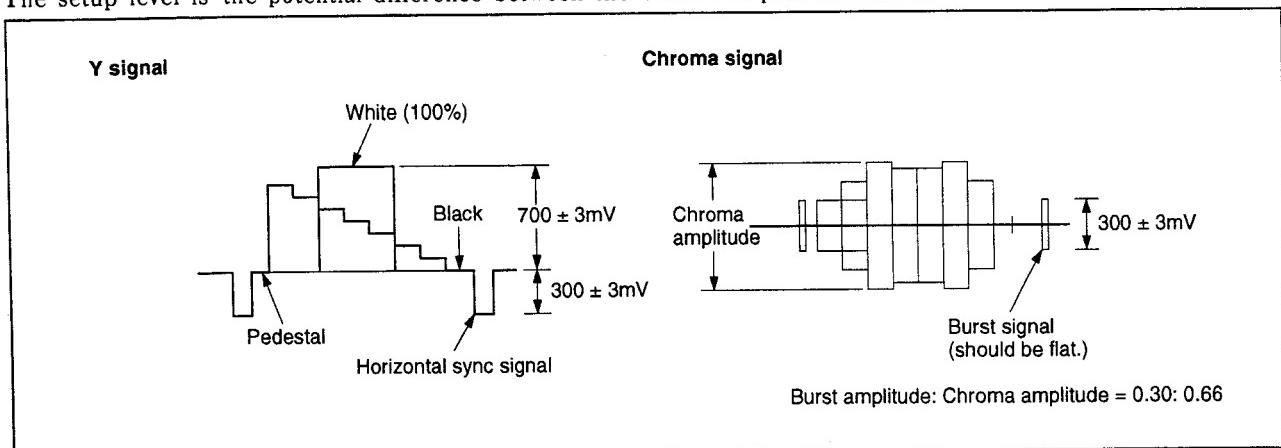


Fig. 7-2. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

2. During video (VIDEO) input

Connect an oscilloscope to the video input terminal, and confirm that the sync signal amplitude of a video signal is 300 mV, the amplitude of the video portion is 700 mV, the setup level is 0 mV, the amplitude of a burst signal is flat (300 mV), and the level ratio of a burst signal to a "red" signal is 0.30 : 0.66.

The video signal (color-bar) used for the adjustment is shown in Fig. 7-3.

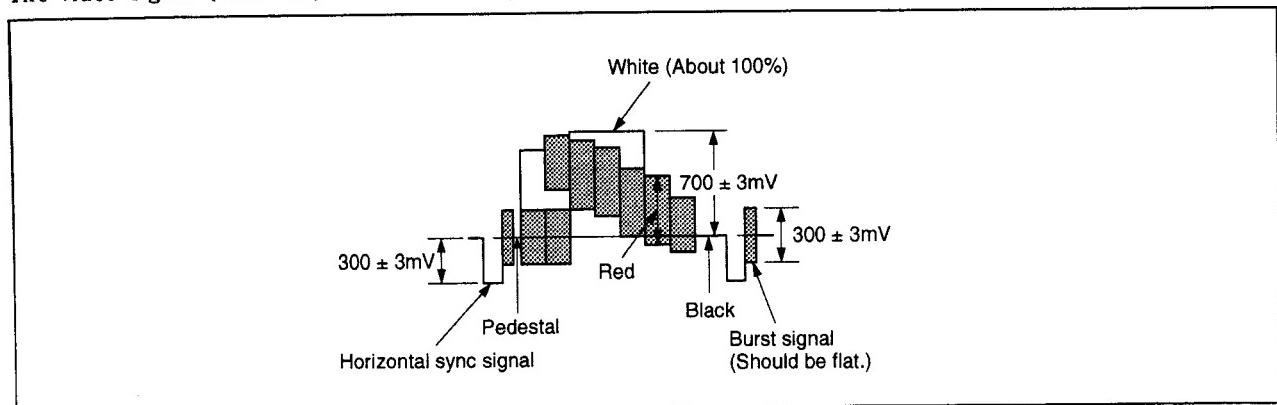


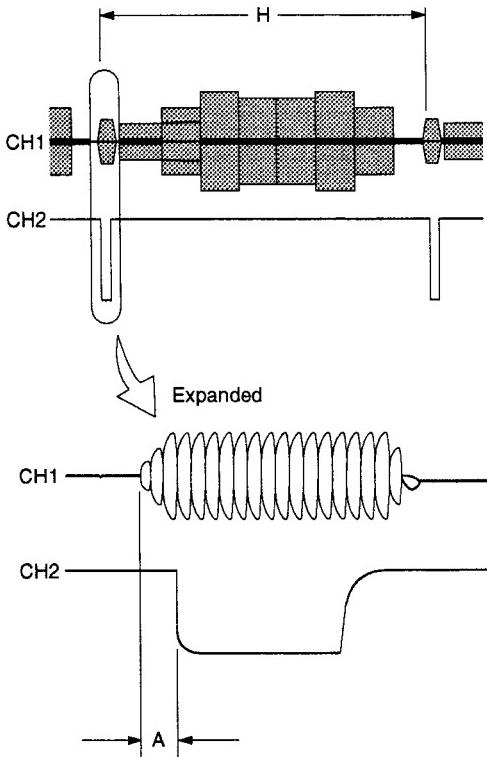
Fig. 7-3. Color-Bar Signal in Pattern Generator (during 75-ohm Termination)

7-2. VIDEO CIRCUIT ADJUSTMENT (VA-76 (B) BOARD)

7-2-1. INT/EXT Detection Level Adjustment

Conditions for adjustment	Spec.	Adjustment	
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Digital voltmeter 	Measurement point: Pin ⑦ of IC106 or positive ("+" side of C103 2.0 ± 0.05 V DC	Adjustment page	F
		Adjustment address	22

7-2-2. BGP Phase Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	Measurement point: Pin ⑬ of C376 or IC311 (CH1) Pin ⑯ of IC311 (CH2)  <p style="text-align: center;">$A = 0.77 \pm 0.07 \mu\text{ sec}$</p>	Ⓐ RV304

7-2-3. APC Free-Running Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with the input cable removed) Measurement equipment: Frequency counter 	<p>Measurement point: Emitter of Q334 or Q328 Shortcircuit IC311(23) pin to ground and IC311(31) pin to ground.</p> $f = 4.433619 \text{ MHz} \pm 20\text{Hz}$	Ⓐ RV301

7-2-4. INT Sync Generator Frequency Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Frequency counter 	<p>Measurement point: Pin ②4 of IC130 or pin ① of IC128</p> $f = 4.433619 \text{ MHz} \pm 20 \text{ Hz}$	Ⓐ CT102

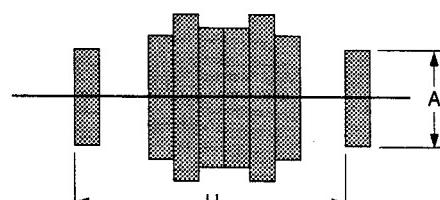
7-2-5. AFC Error Voltage Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Non-signal (with all the input cables removed) Measurement equipment: Digital voltmeter 	<p>Measurement point: CC101</p> $- 0.5 \pm 0.2 \text{ V DC}$	Ⓐ CT101

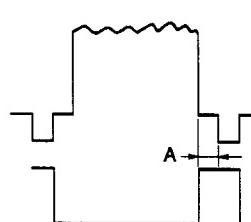
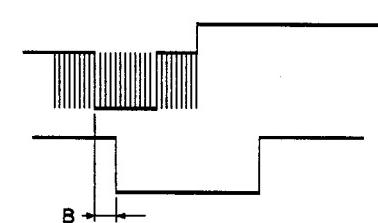
7-2-6. Y/C Separation Y-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q116 or Q218</p> $A = 1.00 \pm 0.03 \text{ V p-p}$	Ⓐ RV302

7-2-7. Y/C Separation Chroma-Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q121</p>  <p>$A = 300 \pm 30 \text{ mV p-p}$</p>	RV303

7-2-8. SYNC SEPA Phase Check

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: IC110 ⑨ pin (Phase check of H SYNC and HD PULSE)</p>  <p>$A = 11.5 \pm 1.00 \mu \text{sec}$</p> <p>Measurement point: CN102 ⑧ pin (Phase check of V SYNC and VD PULSE)</p>  <p>$B = 49.0 \pm 3.0 \mu \text{sec}$</p>	

7-2-9. ABL Adjustment (1)

Conditions for adjustment	Spec.	Adjustment						
<ul style="list-style-type: none"> Input signal: Black burst (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Emitter of Q302</p> <p>A = 20 ± 20 mV</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>28</td> </tr> <tr> <td colspan="2">DATAE 80</td> </tr> </table>	Adjustment page	F	Adjustment address	28	DATAE 80	
Adjustment page	F							
Adjustment address	28							
DATAE 80								

7-2-10. ABL Adjustment (2)

Conditions for adjustment	Spec.	Adjustment						
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN101 ②3 pin or C348</p> <p>A = 20 ± 20 mV</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>18</td> </tr> <tr> <td colspan="2">DATAE 80</td> </tr> </table>	Adjustment page	F	Adjustment address	18	DATAE 80	
Adjustment page	F							
Adjustment address	18							
DATAE 80								

7-2-11. White REF Level Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar (only Y) (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: R348 (CL304) (red) (CH1) R341 (white) (CH2)</p> <p>Adjust so that the red (R340 or CL304) of a Y signal component coincides with the peak level of a white REF pulse (R341).</p> <p>A = Within 20 mV</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>17</td> </tr> </table>	Adjustment page	F	Adjustment address	17
Adjustment page	F					
Adjustment address	17					

7-2-12. Decoder DL AMP DAT Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN101 ② pin</p> <p>$A = 0 \pm 100 \text{ mV}$</p> <p>Adjust address 2B and DL303 alternately.</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>2B</td> </tr> </table> <p>:DL303</p>	Adjustment page	F	Adjustment address	2B
Adjustment page	F					
Adjustment address	2B					

7-2-13. Decoder Color (1) Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar 75% (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN101 ② pin</p> <p>$A = 0 \pm 50 \text{ mV}$</p> <p>(Adjust so that the difference in level of each color is zero ("0").)</p> <p>If the difference in level exists in each color, readjust the hue.</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>12</td> </tr> </table>	Adjustment page	F	Adjustment address	12
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Adjustment address	12					

7-2-14. Decoder Color (2) Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Pin ② of CN101 (B OUT)</p> <p>$A = 1.95 \pm 0.05 \text{ V p-p}$</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>12</td> </tr> </table>	Adjustment page	F	Adjustment address	12
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Adjustment address	12					

7-2-15. AGC Level Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN103 ② pin (G OUT)</p> <p>$A = 1.85 \pm 0.05 \text{ V p-p}$</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>1B</td> </tr> </table>	Adjustment page	F	Adjustment address	1B
Adjustment page	F					
Adjustment address	1B					

7-2-16. Decoder Sharpness Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: IC301 ⑨ pin (The levels of 1 MHz and 4 MHz should be the same.)</p> <p>$A = \text{Within } 0.1 \text{ V}$</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>13</td> </tr> </table>	Adjustment page	F	Adjustment address	13
Adjustment page	F					
Adjustment address	13					

7-2-17. VRB CLP Reference Check

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Input signal: No signal input Measurement equipment: Digital multimeter 	<p>Measurement point: CN101 ⑩ pin (CLP REF) : $0.5 \pm 0.1 \text{ V}$</p> <p>Measurement point: CN101 ⑯ pin (V RB) : $0.5 \pm 0.1 \text{ V}$</p>	

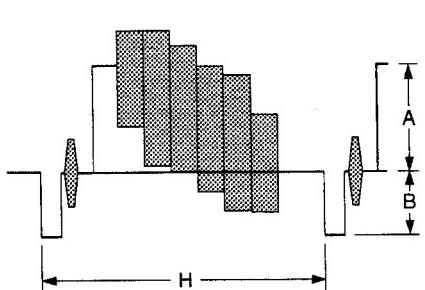
7-2-18. OSD Level Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: No signal input Measurement equipment: Oscilloscope 	<p>Measurement point: VIDEO OUT (75-ohm termination)</p> <p>A = 500 ± 30 mV (Y component of white character.)</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>27</td> </tr> </table>	Adjustment page	F	Adjustment address	27
Adjustment page	F					
Adjustment address	27					

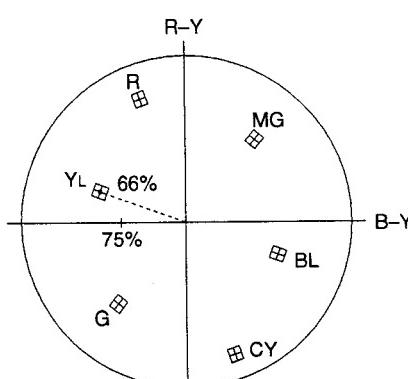
7-2-19. Encoder White Balance Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Mode: Input picture Input signal: Multi-burst (S VIDEO) Measurement equipment: Oscilloscope Vectorscope 75-ohm termination 	<p>Measurement point: Video output terminal</p> <ul style="list-style-type: none"> For vectorscope <p>The white luminescent spot should coincide with the origin.</p> <ul style="list-style-type: none"> For oscilloscope <p>Adjust so that the chroma signal component (3.58 MHz) that leaks to the white portion of an output waveform is minimum.</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>20(ERG) 2A(EBG)</td> </tr> </table> <p>※ Perform address 20 and 2A alternately.</p>	Adjustment page	F	Adjustment address	20(ERG) 2A(EBG)
Adjustment page	F					
Adjustment address	20(ERG) 2A(EBG)					

7-2-20. D/A REF Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: Video output terminal (75-ohm termination)</p>  <p> $A = 485 \pm 20 \text{ mV}$ $B = 300 \pm 30 \text{ mV}$ </p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>1A</td> </tr> </table>	Adjustment page	F	Adjustment address	1A
Adjustment page	F					
Adjustment address	1A					

7-2-21. Encoder Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment										
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Vectorscope Video output terminal in 75-ohm termination 	<p>Measurement point: Video output terminal (Adjust the saturation level of yellow to 66%)</p> <p>For Vectorscope</p>  <p>87% of length between center of yellow "■" and cross point of R-Y and B-Y axes.</p> <p>For Oscilloscope</p> <table> <tr> <td>Yellow, Blue:</td> <td>$430 \pm 20 \text{ mV p-p}$</td> </tr> <tr> <td>Cyan, Red:</td> <td>$610 \pm 20 \text{ mV p-p}$</td> </tr> <tr> <td>Magenta, Green:</td> <td>$566 \pm 20 \text{ mV p-p}$</td> </tr> </table>	Yellow, Blue:	$430 \pm 20 \text{ mV p-p}$	Cyan, Red:	$610 \pm 20 \text{ mV p-p}$	Magenta, Green:	$566 \pm 20 \text{ mV p-p}$	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>23</td> </tr> </table>	Adjustment page	F	Adjustment address	23
Yellow, Blue:	$430 \pm 20 \text{ mV p-p}$											
Cyan, Red:	$610 \pm 20 \text{ mV p-p}$											
Magenta, Green:	$566 \pm 20 \text{ mV p-p}$											
Adjustment page	F											
Adjustment address	23											

7-2-22. Encoder Color Burst Level Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Mode: Input picture Input signal: Non-signal Measurement equipment: Vectorscope 	<p>Measurement point: Video output (in 75-ohm termination)</p> <p>For Vectorscope</p> <p>A: Saturation point one piece</p> <p>For Oscilloscope</p> <p>$B = 300 \pm 10 \text{ mV p-p}$</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>24</td> </tr> </table>	Adjustment page	F	Adjustment address	24
Adjustment page	F					
Adjustment address	24					

7-2-23. S Video Output Y Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope S video output Y terminal in 75-ohm termination 	<p>Measurement point: S VIDEO OUT. CN502 ③ pin(Y)</p> <p>$A = 485 \pm 20 \text{ mV}$</p> <p>$B = 300 \pm 30 \text{ mV}$</p>	

7-2-24. S Video Output Chroma Level Adjustment

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none"> Mode: Input picture Input signal: Color-bar (VIDEO) Measurement equipment: Oscilloscope S video output C terminal in 75-ohm termination 	<p>Measurement point: S VIDEO OUT. CN502 ⑤ pin(C)</p> <p>A = 430 ± 30 mV B = 300 ± 30 mV</p>	

7-2-25. Decoder Hue Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Unti PAL signal (SG-408P) (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN502 ⑤ pin (S VIDEO OUT)</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>11</td> </tr> </table>	Adjustment page	F	Adjustment address	11
Adjustment page	F					
Adjustment address	11					

7-2-26. Decoder DL AMP DAT Adjustment

Conditions for adjustment	Spec.	Adjustment				
<ul style="list-style-type: none"> Input signal: Color-bar (S VIDEO) Measurement equipment: Oscilloscope 	<p>Measurement point: CN101 ② pin(B OUT)</p> <p>A = Within ± 20 mV</p>	<table border="1"> <tr> <td>Adjustment page</td> <td>F</td> </tr> <tr> <td>Adjustment address</td> <td>28</td> </tr> </table> <p>DL303 ※ DL303 and address should be adjusted alternately.</p>	Adjustment page	F	Adjustment address	28
Adjustment page	F					
Adjustment address	28					

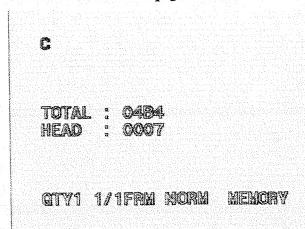
7-3. SERVICE MODE

7-3-1. Entering the Service Mode

* Test signal

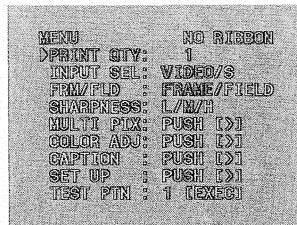
1. Turn on the power switch of the main unit while pressing the STOP and MEMORY IN keys simultaneously.

* The "COLOR VIDEO PRINTER" display blinks on the monitor screen. Press these keys until the motor is loaded and stopped in the meantime, then release them. The screen below then appears.

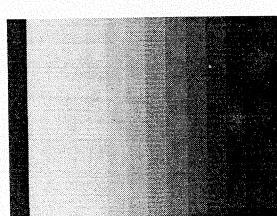


7-3-2. Entering the Print Operation of Pattern Signal

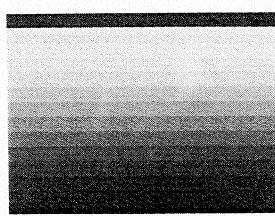
- 1) Press the SOURCE/MEMORY key on the above screen to display the memory screen and press the menu key. The screen below then appears.



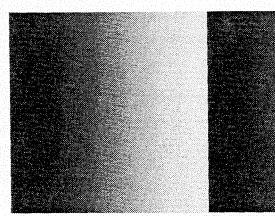
- 2) Move the cursor to TEST PTN by cursor keys (Δ and ∇) and select the desired pattern from among the eight patterns below by cursor keys (\triangleleft and \triangleright).



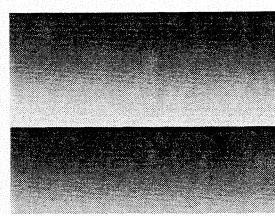
STAIRSTEP H



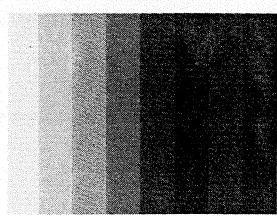
STAIRSTEP V



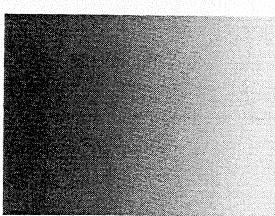
RAMP H



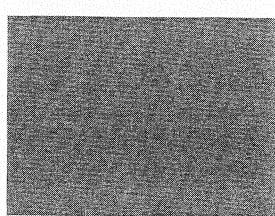
RAMP V



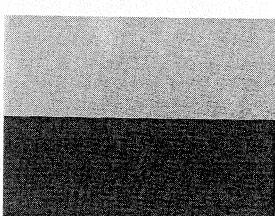
COLOR BAR H



ADJUST RAMP



ADJUST 8081



ADJUST AA55

- 3) The screen becomes black when the EXEC key is pressed. (The PLEASE WAIT display then blinks.)

- 4) Press the PRINT key to print and output a pattern.

- 5) To change the pattern, execute step (2) and press the EXEC key. Then, print and output the pattern using a PRINT key.

7-3-3. Entering the Print Number Counter

* Use the counter during head replacement.

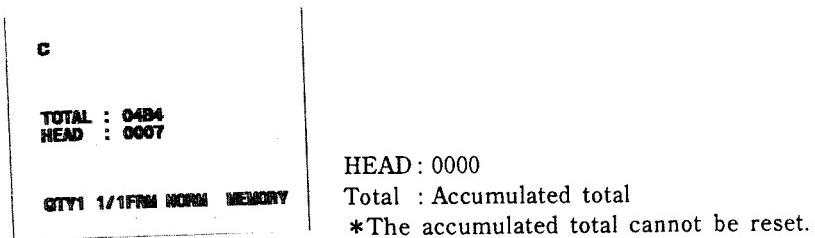
- 1) Insert an adjustment tool RM-95 (J-6082-053-A) remote controller into J-101 on the VA-76 board (with the power turned on).
- 2) To cancel a protector by RM-95, set as shown below.

Page	6	Data	80	Address	00
------	---	------	----	---------	----

- 3) Set as shown below by a remote controller.

Page	F	Data	00 H	Address	EE
Page	F	Data	00 H	Address	EE

* Press the PAUSE key and turn off the power. The counter is then reset.



7-3-4. Replacing the Head

Head position adjustment tool handling (J-9000-250-A)

1. Print two sheets of stair step signals (H) before head replacement (for comparison of each density).
2. Disconnect 10-pin and 12-pin flat cables from the HM board. (Fig. 1)

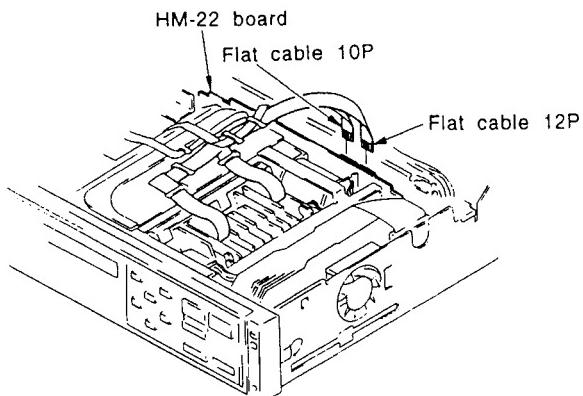


Fig. 1

3. Remove the ribbon guide from the head. (Fig. 2)

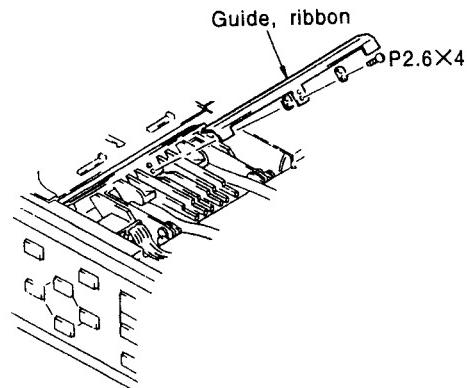


Fig. 2

4. Attach portion R of the Head position adjustment tool (J-9000-250-A) to the shaft of a platen roller. (Fig. 3)

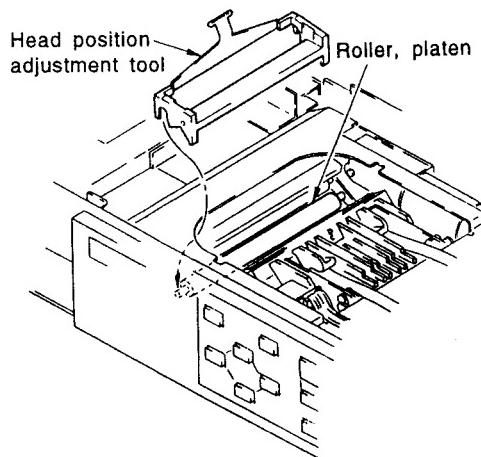


Fig. 3

5. Loosen the two screws, set as shown below by RM-95, and press the PAUSE button.

Page	8	Data	01	Address	10
------	---	------	----	---------	----

6. Move the head position upward and set as shown below.

Page	8	Data	01	Address	1A
------	---	------	----	---------	----

The head position moves upward every time the PAUSE button is pressed. Move the head upward from the home position by three steps. (Fig. 4)

(Head has five positions. 0 → 1 → 2 → 3 → 4)

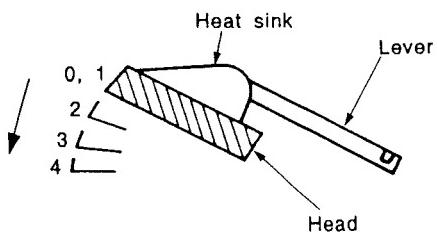


Fig. 4 Five Positions of the Head

7. Tighten the two screws and return the head to the home position. Remove the tool.

Page	8	Data	08	Address	10
------	---	------	----	---------	----

8. Attach the ribbon guide and flat cables.

9. Print two sheets of stair step signals (H) and compare the second sheet with the sheet printed before head replacement to adjust the density.
(For more details, refer to the electrical adjustment and head replacement in Service Manual.)

7-4. HEAD REPLACEMENT

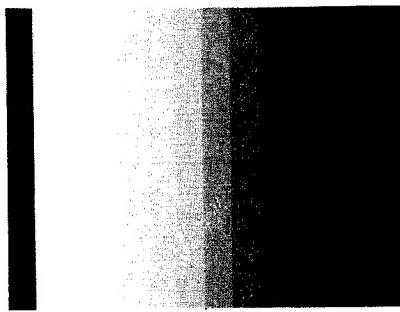
7-4-1. Adjustment

1) Mechanical block

Thermal head replacement (Refer to "Printing the Test Signal by RM-95*".)

(1) Print two sheets of paper via the defective head using a stairstep signal (H) before replacing the thermal head. Use the second sheet of paper for comparison of uneven image density.

After the thermal head was replaced, print two sheets of paper using a stairstep signal (H). Adjust so that the second sheet of printed paper is equal in density to the second sheet of paper printed before replacement.

Conditions for adjustment	Spec.	Adjustment
<ul style="list-style-type: none">· Mode: Memory picture*1· Input signal: Stairstep signal (H)*2	Should be equal to the sample image. 	VR201*3

*1 Press the MEMORY IN or SOURCE/MEMORY button of the unit.

*2 Refer to the stairstep signal (H) in "Entering the Test Signal".

*3 Adjust using VR201 on the power board while pressing switch S705 on the HM board.
[Voltage \oplus (thick); voltage \ominus (thin)]

SONY.

Specs A

COLOR VIDEO PRINTER

UP-1200A

UP-1200AEPM

SERVICE MANUAL

SUPPLEMENT-1

Please add and replace your manual with this SUPPLEMENT-1.

SUBJECT

- EXPLODED VIEWS
- ELECTRICAL PARTS LIST

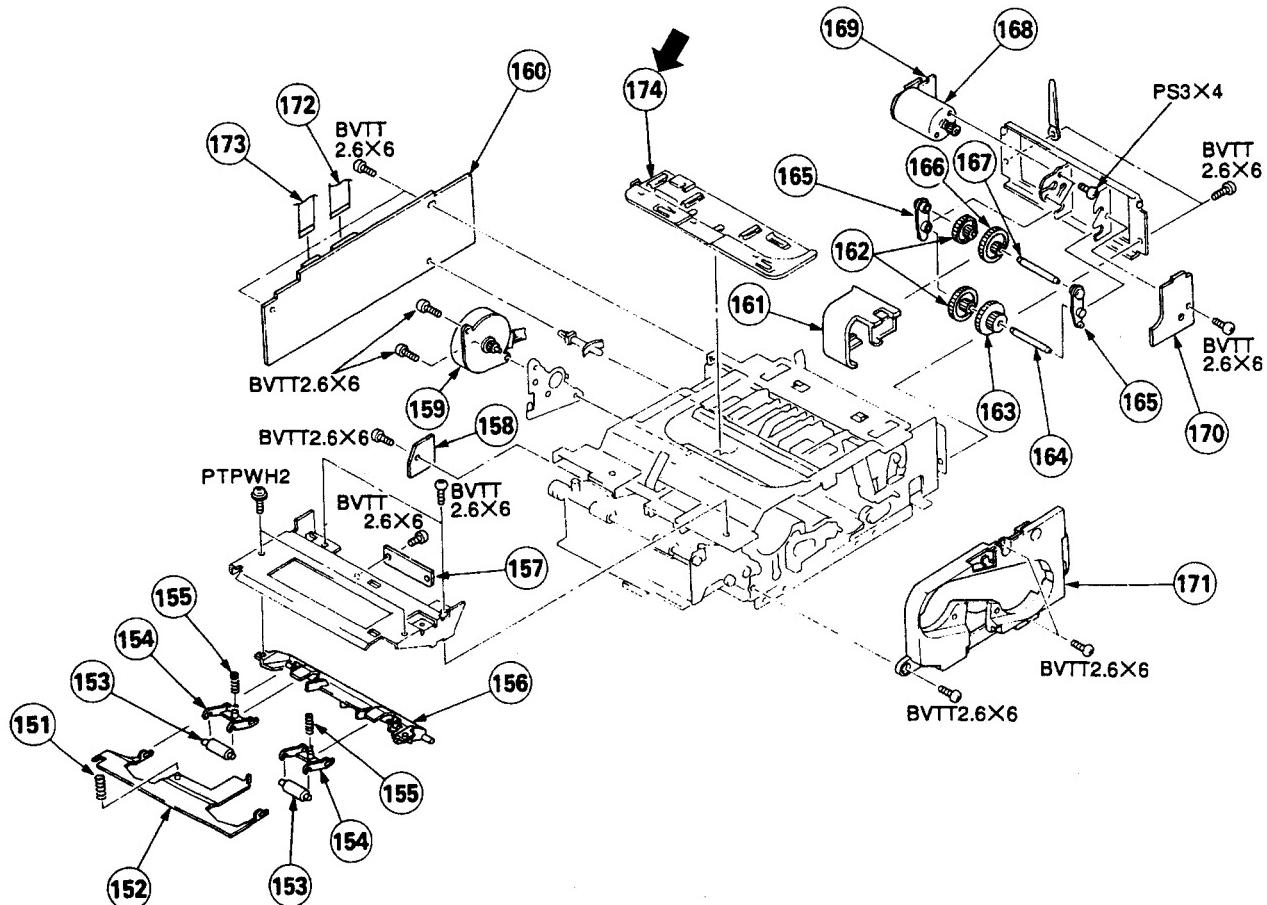
1. CORRECT FOLLOWING ITEMS IN THE SERVICE MANUAL.

Page		Incorrect		Correct
166	102	3-183-605-02 LEVER, PAPER SENSOR	⇒	3-183-185-03 LEVER, PAPER SENSOR
169	275	*3-950-003-01 GUIDE (1) , CASSETTE	⇒	*3-191-701-01 GUIDE (PRT1) , CASSETTE
189	IC403	8-752-093-18 IC UPD23C1001EAGW-355E2	⇒	8-759-344-94 IC MX23C1010-A12M
	IC404	8-752-093-17 IC UPD23C1001EAGW-354E2	⇒	8-759-473-62 IC MSM531001B-64GS-KR1
190	IC501	8-759-352-14 IC HM51L240CS7-EL	⇒	8-759-392-74 IC MB814400C-70PJN-T6
	IC502	8-759-352-14 IC HM51L240CS7-EL	⇒	8-759-392-74 IC MB814400C-70PJN-T6
	IC503	8-759-352-14 IC HM51L240CS7-EL	⇒	8-759-392-74 IC MB814400C-70PJN-T6
	IC504	8-759-093-89 IC HM51L240AS7-EL	⇒	8-759-392-74 IC MB814400C-70PJN-T6
	IC505	8-759-093-89 IC HM51L240AS7-EL	⇒	8-759-392-74 IC MB814400C-70PJN-T6
	IC506	8-759-093-89 IC HM51L240AS7-EL	⇒	8-759-392-74 IC MB814400C-70PJN-T6
	IC901	8-759-325-71 IC MB89098RPFV-G-114-BND	⇒	8-759-437-71 IC MB89098RPFV-G-144-BND (UP-1200A)
			⇒	8-759-463-25 IC MB89098RPFV-G-155-BND (UP-1200AEPM)
193	IC708	8-752-863-53 IC CXP80P116Q	⇒	8-752-888-04 IC CXP80116-419Q (UP-1200A) 8-752-888-03 IC CXP80116-418Q (UP-1200AEPM)
	IC704	8-759-344-54 IC IDT6116SA25SO	⇒	8-759-458-13 IC MSM531001B-62GS-KR1
194	R789	1-216-837-11 METAL 22k 5% 1/16W	⇒	1-216-839-11 METAL 33k 5% 1/16W
	R797	1-216-837-11 METAL 22k 5% 1/16W	⇒	1-216-839-11 METAL 33k 5% 1/16W
	R809	1-216-837-11 METAL 22k 5% 1/16W	⇒	1-216-839-11 METAL 33k 5% 1/16W
	R844	1-216-837-11 METAL 22k 5% 1/16W	⇒	1-216-839-11 METAL 33k 5% 1/16W
	R853	1-216-837-11 METAL 22k 5% 1/16W	⇒	1-216-839-11 METAL 33k 5% 1/16W
195		<CRYSTAL>	⇒	<VIBRATOR>
	X701	1-579-907-21 VIBRATOR, CERAMIC	⇒	1-579-907-21 VIBRATOR, CERAMIC (UP-1200A) 1-579-906-21 VIBRATOR, CERAMIC (UP-1200AEPM)
	X703	1-579-906-21 VIBRATOR, CERAMIC	⇒	1-579-906-21 VIBRATOR, CERAMIC (UP-1200A) 1-579-905-21 VIBRATOR, CERAMIC (UP-1200AEPM)

Page	Incorrect	Correct
226	7-2-13. Decoder Color (1) Adjustment	⇒ delete
227	7-2-16. Decoder Sharpness Adjustment (Measurement point) IC301	⇒ IC311
229	7-2-20. D/A REF Adjustment A = 485 ± 20 mV B = 300 ± 30 mV	⇒ A = 700 ± 20 mV
	7-2-21. Encoder Chroma Level Adjustment 87 % of length between center of yellow "田" and cross point of R-Y and B-Y axes.	⇒ Match the luminance spot of G-ch signal to "田" mark.
	Yellow, Blue : 430 ± 20 mVp-p Cyan, Red : 610 ± 20 mVp-p Magenta, Green : 566 ± 20 mVp-p	⇒ Adjust the level difference between white peak level and chroma level to 0 mV. A = 0 ± 20 mV
230	7-2-23. S Video Output Y Level Adjustment	⇒ delete
231	7-2-24. S Video Output Chroma Level Adjustment	⇒ delete

← : added portion

5-4. MECHANISM DECK ASSEMBLY(1)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-183-629-01	SPRING, COMPRESSION (PAPER A)		163	3-950-015-01	GEAR (B), HEAD DRIVE	
152	3-183-605-01	SENSOR LEVER		164	*3-950-020-01	SHAFT, HEAD DRIVE GEAR	
153	3-950-009-01	ROLLER, PAPER		165	*3-950-017-01	HOLDER, HEAD DRIVE GEAR	
154	3-950-010-01	ARM, PAPER ROLLER		166	3-956-727-01	GEAR (E), HEAD DRIVE	
155	3-950-013-01	SPRING, COMPRESSION		167	*3-950-214-01	SHAFT (S), HEAD DRIVE GEAR	
156	3-183-609-02	GUIDE, UPPER		168	X-3942-122-1	MOTOR, HEAD DRIVE GEAR ASSY	
157	*A-8275-442-A	SW-41 BOARD, COMPLETE		169	*A-8275-435-A	SW-215 BOARD, COMPLETE	
158	*A-8275-441-A	SW-213 BOARD, COMPLETE		170	*A-8275-436-A	SW-212 BOARD, COMPLETE	
159	X-3942-126-1	MOTOR ASSY, STEPPING		171	X-3167-377-1	GUIDE ASSY, CASSETTE ENTRANCE	
160	*A-8275-449-A	HM-22(L) BOARD, COMPLETE (UP-1200A)		172	1-765-052-11	WIRE, FLAT TYPE (16 CORE)	
160	*A-8274-819-A	HM-22P(L) BOARD, COMPLETE (UP-1200AEPM)		173	1-765-051-11	WIRE, FLAT TYPE (7 CORE)	
161	*3-952-505-01	GUARD, HEAD GEAR		174	3-952-129-02	CLAMP, HEAD HARNESS	←
162	3-950-019-01	GEAR (A), HEAD DRIVE					

SWITCHING REGULATOR

<u>Ref.No</u>	<u>PartNo.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref.No</u>	<u>PartNo.</u>	<u>Description</u>	<u>Remark</u>	
There are many mistakes in Switching Regulator part list.								
Therefore, use the following Switching regulator part list instead.								

△ *1-413-942-21		SWITCHING, REGULATOR (UP-1200A)		D101	8-719-500-57	DIODE D3SBA40		
		*****		D102	9-996-310-01	DIODE AG01A		
				D103	8-719-313-16	DIODE AU02A		
				D104	9-907-090-01	DIODE RD47E		
				D105	8-719-114-97	DIODE RD24JSB		
				D106	8-719-200-02	DIODE 10E-2		
				D107	9-900-514-01	DIODE GMA01		
				D108	9-902-050-01	DIODE RM11C		
				D109	9-900-514-01	DIODE GMA01		
				D201	8-719-501-34	DIODE S3VC40R		
				D202	8-719-501-34	DIODE S3VC40R		
				D203	8-719-200-02	DIODE 10E-2		
				D204	9-900-535-01	DIODE AU02A		
C101	1-136-192-11	CERAMIC	0.33MF	250V	D205	9-904-797-01	DIODE RK44	
C102	9-902-038-01	CERAMIC	0.22MF	250V	D206	9-904-797-01	DIODE RK44	
C103	9-907-227-01	CERAMIC	470PF	125V	D207	8-719-501-34	DIODE S3VC40R	
C104	9-907-227-01	CERAMIC	470PF	125V	D208	8-719-160-68	DIODE RD18FB2	
C106	9-907-097-01	ELECT	470MF	200V	D209	8-719-982-04	DIODE ERB81-004	
C107	9-900-522-01	CERAMIC	2200PF	400V	D210	9-904-799-01	DIODE MA2120	
C108	9-900-525-01	CERAMIC	0.047MF	630V			<FUSE>	
C109	9-907-098-01	CERAMIC	220PF	1KV	F101	9-907-103-01	FUSE 4A 250V	
C110	1-130-491-00	CERAMIC	0.047MF	50V			<IC>	
C111	1-124-122-11	ELECT	100MF	50V	IC101	9-904-782-01	IC STR-S6525	
C112	1-126-967-11	ELECT	47MF	50V	IC102	8-759-985-13	IC MA2430	
C113	9-900-525-01	CERAMIC	0.047MF	630V	IC201	8-759-420-19	IC AN1431T	
C114	9-907-098-01	CERAMIC	220PF	1KV	IC202	8-759-135-80	IC UPC358C	
C115	1-128-578-91	ELECT	1MF	100V	IC203	8-759-420-19	IC AN1431T	
C116	1-130-495-00	FILM	0.1MF	50V	IC204	8-759-420-19	IC AN1431T	
C117	1-130-483-00	FILM	0.1MF	50V	IC205	8-749-920-43	IC SI-3050CA	
C201	9-907-113-01	CERAMIC	1000PF	1KV	IC206	8-749-921-21	IC SI-3120C	
C202	9-907-114-01	ELECT	1000MF	35V	IC207	8-749-920-43	IC SI-3050CA	
C203	1-124-906-11	ELECT	4.7MF	50V			<COIL>	
C204	9-907-114-01	ELECT	1000MF	35V	IC208	8-749-920-43	IC SI-3050CA	
C205	1-126-965-51	ELECT	22MF	50V			<CONNECTOR>	
C207	1-130-483-00	FILM	0.01MF	50V	L101	9-907-229-01	FILTER	
C208	9-907-113-01	CERAMIC	1000PF	1KV	L102	9-907-229-01	FILTER	
C209	1-126-927-11	ELECT	2200MF	10V	L103	9-904-796-01	BEADS CORE	
C210	1-126-927-11	ELECT	2200MF	10V	L104	9-904-796-01	BEADS CORE	
C211	1-124-903-11	ELECT	1MF	50V	L201	9-902-553-01	BEADS CORE	
C212	1-126-926-11	ELECT	1000MF	10V	L202	9-902-553-01	BEADS CORE	
C213	1-126-933-11	ELECT	100MF	10V	L203	9-907-112-01	CHOKE COIL	
C214	1-126-933-11	ELECT	100MF	10V	L204	9-902-553-01	BEADS CORE	
C215	9-907-113-01	CERAMIC	1000PF	1KV	L205	9-907-112-01	CHOKE COIL	
C216	1-124-557-11	ELECT	1000MF	25V	L206	9-902-553-01	BEADS CORE	
C217	1-216-933-11	ELECT	100MF	16V				
C218	1-126-926-11	ELECT	1000MF	10V				
C219	1-126-933-11	ELECT	100MF	10V				
C220	1-130-483-00	FILM	0.01MF	50V				
C221	1-130-491-00	FILM	0.047MF	50V				
C222	1-124-122-11	ELECT	100MF	50V				
CN1	9-907-104-01	CONNECTOR 4P						
CN2	9-907-105-01	CONNECTOR 2P						
CN3	9-907-105-01	CONNECTOR 2P						
CN901	1-560-892-00	CONNECTOR 4P						
CN902	1-560-894-00	CONNECTOR 6P						

The components identified by shading and mark △ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SWITCHING REGULATOR

Ref. No	Part No.	Description	Remark	Ref. No	Part No.	Description	Remark
		<PHOTO COUPLER>		R219	1-247-855-31	CARBON	10K
PC101	8-719-161-00	PHOTO COUPLER PS2501		R220	1-214-736-00	FILM	2K
PC102	8-719-161-00	PHOTO COUPLER PS2501		R221	1-214-753-00	FILM	10K
PC201	8-719-161-00	PHOTO COUPLER PS2501		R222	1-260-083-11	CARBON	47
		<TRANSISTOR>		R223	1-244-417-11	CARBON	1K
Q101	9-904-781-01	TRANSISTOR 2SC2061		R224	1-249-419-11	CARBON	1.5K
Q201	8-729-900-80	TRANSISTOR DTC114ES		R225	1-247-855-31	CARBON	10K
Q202	8-729-900-80	TRANSISTOR DTC114ES		R226	9-907-107-01	METAL OXIDE	430
Q203	8-729-900-80	TRANSISTOR DTC114ES		R227	9-907-094-01	METAL OXIDE	1.2K
Q204	8-729-900-80	TRANSISTOR DTC114ES		R228	9-907-108-01	CARBON	0.22
Q205	8-729-900-80	TRANSISTOR DTC114ES		R229	9-907-109-01	METAL OXIDE	1.3K
		<RESISTOR>		R230	9-907-107-01	METAL OXIDE	430
R101	1-202-719-00	SOLID	1M	R231	1-249-416-11	CARBON	820
R102	9-904-783-01	THERMISTOR	5		1-249-414-11	CARBON	1/4W
R103	9-907-225-01	FILM	47K				
R104	9-907-225-01	FILM	47K				
R105	1-247-887-00	CARBON	220K				
			1/4W				
R106	1-247-887-00	CARBON	220K				
R107	1-215-925-11	FILM	22K	T101	9-904-792-01	SWITCHING	
R108	1-215-925-11	FILM	22K	T102	9-907-228-01	SWITCHING	
R109	1-215-882-00	FILM	22				
R110	9-904-784-01	METAL	0.15				
			2W				
R111	1-260-064-11	CARBON	1	VR201	9-907-110-01	RES, VER, CARBON	2K
R112	1-260-080-11	CARBON	27	VR202	9-907-111-01	RES, VER, CARBON	500
R113	1-247-855-31	CARBON	10K	VR203	1-238-570-11	RES, VER, CARBON	2.2K
R114	1-249-412-11	CARBON	390	VR204	1-238-570-11	RES, VER, CARBON	2.2K
R115	1-249-437-11	CARBON	47K				
			1/4W				
R116	1-249-411-11	CARBON	330				
R117	1-249-423-11	CARBON	3.3K				
R118	1-249-441-11	CARBON	100K				
R119	1-249-441-11	CARBON	100K				
R120	1-249-433-11	CARBON	22K				
			1/4W				
R121	1-215-927-00	FILM	47K				
R122	1-215-927-00	FILM	47K				
R123	9-904-899-01	CARBON	15				
R124	9-907-226-01	CARBON	22				
R125	1-260-087-11	CARBON	100				
			1/2W				
R126	1-249-408-11	THERMISTOR	180				
R201	1-215-916-00	FILM	680				
R202	1-215-916-00	FILM	680				
R203	1-260-099-11	CARBON	1K				
			1/2W				
R204	1-247-855-31	CARBON	10K				
R205	1-247-855-31	CARBON	10K				
R206	1-249-420-11	CARBON	1.8K				
R207	1-249-417-11	CARBON	1K				
R208	1-249-423-11	CARBON	3.3K				
			1/4W				
R209	1-249-415-11	CARBON	680				
R210	9-902-556-01	METAL	1				
R211	1-247-855-31	CARBON	10K				
R212	9-904-801-01	FILM	8.25K				
R213	1-247-855-31	CARBON	10K				
			1/4W				
R214	1-247-855-31	CARBON	10K				
R215	1-247-855-31	CARBON	10K				
R216	1-247-855-31	CARBON	10K				
R217	1-249-425-11	CARBON	4.7K				
R218	1-247-855-31	CARBON	10K				
			1/4W				

SWITCHING REGULATOR

(SWITCHING REGULATOR)

Ref. No. or Q'ty	Part No.	SP Description	Ref. No. or Q'ty	Part No.	SP Description
1pc	△ 1-413-946-21 o	SWITCHING, REGULATOR (UP-1200AEPM)	CN905	1-506-468-11 s	CONNECTOR 3P, BLACK
2pcs	9-904-821-01 s	FUSE CLIP	CN906	1-564-013-31 s	CONNECTOR 3P, RED
1pc	9-907-116-01 o	HEAT SINK (IC101, IC102)	CN907	1-568-779-11 s	CONNECTOR 2P
1pc	9-907-117-01 o	HEAT SINK (IC103)	D101	8-719-500-58 s	BRIDGE DIODE D3SBA60
3pcs	9-907-118-01 o	HEAT SINK (IC205, IC206, IC207, IC208)	D102	8-719-030-25 s	DIODE EG01C-VO
1pc	9-907-119-01 o	PRINTED CIRCUIT BOARD	D103	8-719-313-16 s	DIODE AU02A
1pc	9-907-120-01 s	SPACER	D104	9-907-090-01 s	DIODE RD47E
2pcs	9-907-121-01 o	SHEET, INSULATING	D105	8-719-114-97 s	DIODE RD24JSB
1pc	9-907-122-01 o	SHEET, INSULATING	D106	8-719-200-82 s	DIODE 11ES2
C101	1-137-472-11 s	FILM 0.68uF 250V	D107	1-806-836-11 s	DIODE MA165
C102	9-902-038-01 s	FILM 0.22uF 250V	D108	8-719-304-63 s	DIODE RM11C
C103	9-909-242-01 s	CERAMIC 1000PF 250V	D109	1-806-836-11 s	DIODE MA165
C104	9-909-242-01 s	CERAMIC 1000PF 250V	D110	8-719-304-63 s	DIODE RM11C
C105	9-907-096-01 s	CERAMIC 4700PF 250V	D111	8-719-304-63 s	DIODE RM11C
C106		s ELECT 220uF 400V	D201	8-719-501-34 s	DIODE S3VC40R
C107	9-900-522-01 s	CERAMIC 2200PF 250V	D202	8-719-501-34 s	DIODE S3VC40R
C108	9-900-525-01 s	FILM 0.047uF 630V	D203	8-719-200-82 s	DIODE 11ES2
C109	9-907-098-01 s	CERAMIC 220PF 1KV	D204	8-719-313-16 s	DIODE AU02A
C110	1-130-491-00 s	FILM 0.047uF 50V	D205	9-903-219-01 s	DIODE RK44
C111	1-124-122-11 s	ELECT 100uF 50V	D206	9-903-219-01 s	DIODE RK44
C112	1-126-967-11 s	ELECT 47uF 50V	D207	8-719-501-34 s	DIODE S3VC40R
C113	9-900-525-01 s	FILM 0.047uF 630V	D208	8-719-160-68 s	DIODE RD18FB2
C114	9-907-098-01 s	CERAMIC 220PF 1KV	D209	8-719-981-00 s	DIODE ERC81-004
C115	1-126-964-11 s	ELECT 10uF 50V	D210	9-904-799-01 s	DIODE MA2120
C116	1-130-495-00 s	FILM 0.1uF 50V	F101	9-907-103-01 s	FUSE 4A 250V
C118	9-909-242-01 s	CERAMIC 1000PF 250V	F102	9-907-103-01 s	FUSE 4A 250V
C119	9-909-242-01 s	CERAMIC 1000PF 250V	IC101	8-749-924-40 s	IC STR-S6525
C120	9-907-096-01 s	CERAMIC 4700PF 250V	IC102	8-759-977-63 s	IC MA2830
C121		s ELECT 220uF 400V	IC103	8-749-923-66 s	IC STR-83145
C122	1-130-491-00 s	FILM 0.047uF 50V	IC201	8-759-420-19 s	IC AN1431T25
C123	1-136-189-00 s	FILM 0.1uF 250V	IC202	8-759-135-80 s	IC UPC358C
C124	1-136-189-00 s	FILM 0.1uF 250V	IC203	8-759-420-19 s	IC AN1431T25
C125	9-907-099-01 s	FILM 4.7uF 400V	IC204	8-759-420-19 s	IC AN1431T25
C126	1-124-903-11 s	FILM 1uF 50V	IC205	8-749-920-43 s	IC SI-3050CA
C201	9-907-113-01 s	CERAMIC 1000PF 1KV	IC206	8-749-921-21 s	IC SI-3120CA
C202	9-907-114-01 s	ELECT 1000uF 35V	IC207	8-749-920-43 s	IC SI-3050CA
C203	1-124-927-11 s	ELECT 4.7uF 100V	IC208	8-749-920-43 s	IC SI-3050CA
C204	9-907-114-01 s	ELECT 1000uF 35V	L101	9-907-102-01 s	FILTER, LINE
C205	1-126-233-11 s	ELECT 22uF 50V	L102	9-907-102-01 s	FILTER, LINE
C207	1-130-483-00 s	FILM 0.01uF 50V	L103	9-904-796-01 s	BEAD CORE
C208	9-907-113-01 s	CERAMIC 1000PF 1KV	L104	9-904-796-01 s	BEAD CORE
C209	1-126-927-11 s	ELECT 2200uF 10V	L201	9-902-553-01 s	BEAD CORE
C210	1-126-927-11 s	ELECT 2200uF 10V	L202	9-902-553-01 s	BEAD CORE
C211	1-124-903-11 s	ELECT 1uF 50V	L203	9-907-112-01 s	COIL, CHOKE 10uH
C212	1-126-926-11 s	ELECT 1000uF 10V	L204	9-902-553-01 s	BEAD CORE
C213	1-126-933-11 s	ELECT 100uF 16V	L205	9-907-112-01 s	COIL, CHOKE 10uH
C214	1-126-933-11 s	ELECT 100uF 16V	L206	9-902-553-01 s	BEAD CORE
C215	9-907-113-01 s	CERAMIC 1000PF 1KV	PC101	8-749-923-50 s	PHOTOCOUPLED PC111YS
C216	1-124-557-11 s	ELECT 1000uF 25V	PC102	8-749-923-50 s	PHOTOCOUPLED PC111YS
C217	1-126-933-11 s	ELECT 100uF 16V	PC201	8-719-161-00 s	PHOTOCOUPLED PS2501-1-H
C218	1-126-926-11 s	ELECT 1000uF 10V	Q101	9-904-781-01 s	TRANSISTOR 2SC2061
C219	1-126-933-11 s	ELECT 100uF 16V	Q201	8-729-900-80 s	TRANSISTOR DTC114ES
C220	1-130-483-00 s	FILM 0.01uF 50V	Q202	8-729-900-80 s	TRANSISTOR DTC114ES
C222	1-124-122-11 s	ELECT 100uF 50V	Q203	8-729-900-80 s	TRANSISTOR DTC114ES
CN1	9-907-104-01 s	CONNECTOR 4P	Q204	8-729-900-80 s	TRANSISTOR DTC114ES
CN2	9-907-105-01 s	CONNECTOR 2P	Q205	8-729-900-80 s	TRANSISTOR DTC114ES
CN3	9-907-105-01 s	CONNECTOR 2P	R101	1-202-719-00 s	COMP 1M 1/2W
CN901	1-560-892-00 s	CONNECTOR 4P	R102	9-904-783-01 s	THERMISTOR 5
CN902	1-560-894-00 s	CONNECTOR 6P			
CN903	1-568-702-11 s	CONNECTOR 15P			
CN904	1-506-468-11 s	CONNECTOR 3P			

(SWITCHING REGULATOR)

Ref. No. or Q'ty	Part No.	SP Description
R103	1-218-642-11 s	METAL 100K 1W
R104	1-218-642-11 s	METAL 100K 1W
R105	1-260-127-11 s	CARBON 220K 1/2W
R106	1-260-127-11 s	CARBON 220K 1/2W
R107	1-215-925-11 s	METAL 22K 3W
R108	1-215-925-11 s	METAL 22K 3W
R109	1-215-882-00 s	METAL 22 2W
R110	9-907-093-01 s	WIREDOWN 0.15 2W
R111	9-907-094-01 s	RESISTOR 1/2W
R112	1-260-080-11 s	CARBON 27 1/2W
R113	1-247-855-31 s	CARBON 10K 1/4W
R114	1-249-412-11 s	CARBON 390 1/4W
R115	1-247-871-11 s	CARBON 47K 1/4W
R116	1-249-411-11 s	CARBON 330 1/4W
R117	1-249-423-11 s	CARBON 3.3K 1/4W
R118	1-247-883-00 s	CARBON 150K 1/4W
R119	1-247-883-00 s	CARBON 150K 1/4W
R120	1-240-441-11 s	CARBON 100K 1/4W
R121	1-215-928-11 s	METAL 68K 3W
R122	1-215-928-11 s	METAL 68K 3W
R123	1-215-863-11 s	METAL 100 1W
R124	1-215-863-11 s	METAL 100 1W
R125	1-260-091-11 s	CARBON 220 1/2W
R126	9-904-783-01 s	THERMISTOR 5
R127	1-260-127-11 s	CARBON 220K 1/2W
R128	1-260-127-11 s	CARBON 220K 1/2W
R129	2-249-389-11 s	CARBON 4.7 1/4W
R130	1-247-883-00 s	CARBON 150K 1/4W
R131	1-249-408-11 s	CARBON 180 1/4W
R132	1-240-441-11 s	CARBON 100K 1/4W
R201	1-215-916-00 s	METAL 680 3W
R202	1-215-916-00 s	METAL 680 3W
R203	1-260-099-11 s	CARBON 1K 1/2W
R204	1-247-855-31 s	CARBON 10K 1/4W
R205	1-247-855-31 s	CARBON 10K 1/4W
R206	1-249-420-11 s	CARBON 1.8K 1/4W
R207	1-249-417-11 s	CARBON 1K 1/4W
R208	1-249-423-11 s	CARBON 3.3K 1/4W
R209	1-249-415-11 s	CARBON 680 1/2W
R210	9-902-556-01 s	RES, FUSIBLE 1 1/4W
R211	1-247-855-31 s	CARBON 10K 1/4W
R212	9-904-801-01 s	METAL 8.25K 1/4W
R213	1-247-855-31 s	CARBON 10K 1/4W
R214	1-247-855-31 s	CARBON 10K 1/4W
R215	1-247-855-31 s	CARBON 10K 1/4W
R216	1-247-855-31 s	CARBON 10K 1/4W
R217	1-249-425-11 s	CARBON 4.7K 1/4W
R218	1-247-855-31 s	CARBON 10K 1/4W
R219	1-247-855-31 s	CARBON 10K 1/4W
R220	1-215-428-00 s	METAL 2K 1/4W
R221	1-214-753-00 s	METAL 10K 1/4W
R222	1-260-083-11 s	CARBON 47K 1/2W
R223	1-249-417-11 s	CARBON 1K 1/4W
R224	1-249-419-11 s	CARBON 1.5K 1/4W
R225	1-247-855-31 s	CARBON 10K 1/4W
R226	9-907-107-01 s	RESISTOR 430 14W
R227	9-907-108-01 s	RES, FUSIBLE 0.22 14W
R228	9-907-108-01 s	RES, FUSIBLE 0.22 14W
R229	9-907-109-01 s	RESISTOR 1.3K 14W
R230	1-249-416-11 s	CARBON 820 1/4W
R231	1-249-414-11 s	CARBON 560 1/4W

(SWITCHING REGULATOR)

Ref. No. or Q'ty	Part No.	SP Description
RY201	9-907-115-01 s	RELAY
T101	9-907-100-01 s	SWITCHING
T102	9-907-101-01 s	SWITCHING
TC101	9-907-092-01 s	THERMAL CUT OFF M135
VR201	9-907-110-01 s	RES, VAR CARBON 2K
VR202	9-907-111-01 s	RES, VAR CARBON 500
VR203	1-238-570-11 s	RES, VAR CARBON 2.2K
VR204	1-238-570-11 s	RES, VAR CARBON 2.2K